



**International Geographical Union Union
Géographique Internationale
Unión Geográfica Internacional**

Report of the Commission Activities 2019-2020

**IGU Commission on
Mountain Studies**

1. Membership

Chair: Fausto O. Sarmiento, Ph.D. fsarmien@uga.edu

Professor Doctor. Director, Neotropical Montology Collaboratory
Department of Geography, University of Georgia, Athens, Ga.
UNITED STATES OF AMERICA / ECUADOR.

Vice Chair: Alexey Gunya, Ph.D. a.n.gunya@igras.ru

Professor Doctor. Department of Physical Geography
Institute of Geography, Russian Academy of Sciences, Moscow,
RUSSIA.

Vice Chair: Irasema Alcántara-Ayala, Ph.D. irasema@igg.unam.mx

Professor Doctor. Department of Physical Geography
Institute of Geography, National Autonomous University of Mexico (UNAM),
MEXICO.

Secretary and website node: Pankaj Kumar, Ph.D. pankajdsedu@gmail.com

Assistant Professor. Dept. of Geography
Delhi School of Economics. University of Delhi. Delhi-110017,
INDIA

Members:

Marten Geertsema, PhD, Pag, Pgeo. Marten.Geertsema@gov.bc.ca

Ministry of Forests, Lands & Natural Resource Operations
Adjunct Professor. Department of Ecosystem Science and Management
University of Northern British Columbia.
CANADA.

Matthias Schmidt, Ph.D. schmidt@geo.uni-augsburg.de

Professor Doctor. Institute of Geography. University of Augsburg.
GERMANY.

Bob Nakileza. nakilezabob@gmail.com

Senior Lecturer. Department of Environmental Management,
College of Agricultural & Environmental Sciences
Makerere University, Kampala.
UGANDA.

Sean Fitzsimons, Ph.D. sjf@geography.otago.ac.nz

School of Geography/ Te Ihowhenua
University of Otago/ Te Whare Wananga o Otago
Te Wai Pounamu, NEW ZEALAND.

Sebastián Boillat, Ph.D. sebastien.boillat@giub.unibe.ch

Research Associate. Sustainable Land Management.
Institute of Geography, University of Bern
SWITZERLAND.

Dunlian Qiu, Ph.D. qiudunlian@imde.ac.cn

Professor. Institute of Mountain Hazards and the Environment
Executive Editor in Chief, *Journal of Mountain Science*
Chinese Academy of Science, Chengdun.
CHINA.

Suneetha Subramanian, Ph.D. subramanian@unu.edu

Research associate, Institute for Global Environmental Sustainability,
University of the United Nations.
INDIA.

Tomás Ibarra, Ph.D. tucuquere.jti@gmail.com

Assistant Professor. Center UC of local development, education and intercultural studies. Center of Intercultural and Indigenous Studies,
Pontifical Catholic University of Chile, Villarrica,
CHILE.

Rachid Cheddadi, Ph.D. rachid.cheddadi@umontpellier.fr

Doctor. Institute of Evolutionary Sciences (ISEM),
CNRS, University of Montpellier,
FRANCE

Lynn Resler, PhD resler@vt.edu

Professor. Department of Geography
Virginia Tech, Charleston, Virginia
UNITED STATES OF AMERICA.

Kenichi Ueno, Ph.D. ueno.kenichi.fw@u.tsukuba.ac.jp

Associate Professor. Climatology and Meteorology
Faculty of Life and Environmental Science. University of Tsukuba, Ibaraki.
JAPAN.

María José Vizcaino, M.Sc. majo.vizcaino@ipgh.gob.ec

Technical Secretary. Pan American Institute of Geography and History (IPGH)
Quito,
ECUADOR / MEXICO.

Andreas Haller, Ph.D.

Research Associate. Institute for Interdisciplinary Mountain Research
Austrian Academy of Science. Technikerstrasse 21^a. 6020 Innsbruck.
AUSTRIA / PERU

Barbaros Gönençgil, PhD. barbaros@istanbul.edu.tr

Full professor of Geography and Head
Department of Geography, Istanbul University
TURKEY

Honorary members

Prof. Dr. Jack D. Ives. jackives@cunet.carleton.ca

Emeritus, Department of Geography, Carleton University,
CANADA

Prof. Dr. Christoph Stadel. christoph.stadel@sbg.ac.at

Emeritus, Department of Geography, University of Salzburg
AUSTRIA

Prof. Dr. Yuri Badenkov. yubaden@mail.ru

Emeritus, Institute of Geography, Russian Academy of Sciences
RUSSIA

The **Commission of Mountain Studies (CMS)** was approved for creation in 2019, after a meeting of mountain geographers during the Word Conference on Mountains in Innsbruck, Austria 2019, who wanted to activate the Commission of Mountain Responses to Climate Change that ceased to operate.

Goal: To bring together the IGU community working in mountain areas to promote mountain research, disseminate and exchange of knowledge and experience between researchers from different countries and scientific schools in the field of mountain geography research. Priority pillars are the strengthening of the role of geography as cross-cutting transdisciplinary research and the scholarly exchange of knowledge between different regions of the world.

Together with partners from in- and outside the scientific community, and with different levels of academic standing, the IGU_CMS **aims at:**

- Closely interacting with interdisciplinary foci, developing geographic tools, and promoting its use in transdisciplinary research;
- Promoting a more balanced study of the world's mountain socioecological systems;
- Informing other members about their work via networking;
- Establishing scholarly exchanges to allow for active recruitment of more geographers into the discipline of mountain geography;
- Contributing to sharing wisdom and transfer of knowledge among mountain scholars of different academic backgrounds and methodological affiliations;
- Enhancing opportunities for global engagement in active scientific networks of North-North, North-South, and South-South cooperation.
- Advising public and private groups on the advances of Montology as a way to integrate the geographic sciences with the humanities and the arts.
- Provide opportunities for young researchers and career training options for more young faculty and seasoned colleagues.

For the first period (2020-2024) this double orientation on interdisciplinary research and transfer of knowledge/wisdom sharing will be of even greater importance, as montology, the transdisciplinary science of mountain studies grows and establishes with new peer-reviewed publications, international fellowships, advanced degree offerings, scientific conferences and public events to highlight mountain themes.

In the field of interdisciplinary research:

- Cooperation of the natural, social and human sciences in the field of mountain studies, GMBA, GLORIA, IPBES; SATOYAMA
- Mountainscape transformation and global land cover project, PAGES;
- Mountain governance and environmentality, MRI, FAO, Mountain Partners;
- Mountain socioecological production systems and poverty alleviation, UNU, IGES, Aichi targets, UN-SDG.

In the field of the knowledge transfer/wisdom sharing:

- Research in cooperation with the regional networks (Andes, Himalayas, Atlas, Caucasus, Alps, Appalachians, Sierras, Afromontane, etc) and coordination with geographic societies elsewhere (Home of Geography, AAG, LAG, CAG, etc.)
- Participation in and organization of International conferences, thematic workshops, virtual coffees, webminars, etc...

Note: The **Commission of Mountain Studies** is newly constituted, therefore, we offer ten prospective activities for membership engagement:

- (1) Launching of the Commission of Mountain Studies during the IGC 2021 in İstanbul “*Geography: Bridging the Continents*”.
- (2) Organizing an international symposium on *Mountain Studies and Satoyama Landscapes*, during the 34th IGU Congress
- (3) Select manuscripts from the Symposium to be submitted for a special issue of the *Journal of Mountain Sciences*.
- (4) Website development within the IGU portal and maintaining a presence in cyberspace as a research coordinating network.
- (5) Producing a biannual newsletter featuring achievements in mountain geography and networking with established mountain research groups.
- (6) Compile a bibliographic data-bank as a teaching resource for Mountain Geography and Mountain Studies at large, *a-la* Oxford-Bibliography
- (7) Publish an edited volume (with Routledge) that could be used as an undergraduate textbook for Mountain Studies.
- (8) Organize an International State of the Art Conference on Mountain Studies as a preparatory venue for the 35th IGU Congress.
- (9) Organize a training workshop for capacity building for young career scholars, teachers of geography and other mountain stakeholders.
- (10) Catalyze the preparation of grant proposals for mountain donors (e.g., Belmont Forum) to catalyze the Commission membership in international research.

1.1. Past actions undertaken during the period 2000-2020:

Interest for mountain themes have been present in the IGU during several decades. The IGU Commission on Mountain Studies (IGU_CMS) inherits the traditions of the mountain commissions of the past decades, starting with the Commission on High-Altitude Geoecology (1968-1976). Since then, we have noted a clear trend towards the interdisciplinarity of mountain research. In this regard, in the 1990s, the commission was re-named Mountain Geoecology and Sustainable Development. A recent development in the 2010s re-named it to the Commission of Mountain Responses to Climate Change.

At present, mountain geography needs to study complex relationships in socio-ecological systems, and to cover various aspects of the relationship between man and nature in the mountains at the local, regional and global levels. Strengthening interdisciplinary approaches to the study of mountains is very important to respond to current challenges – landscape transformation, climate change, regenerative development, etc. However, the use of interdisciplinary approaches is very uneven when studying mountain systems in the world: some mountain systems are studied in more detail and comprehensively, others are weak or one-sided, or by a different methodology. By having the overarching theme of transdisciplinary Mountain Research and Innovation, we suggest that our IGU_CMS will create a long-lasting effort to recruit and engage mountain geographers the world over, helping bridge the North-South divide and the generational chiasm among mountain researchers and practitioners.

1.2. Proposed actions to be undertaken during the period

2020-2024 Committee:

- Developing a working website to activate the network and increase visibility of the organization by the number of mountain geographers applying membership at CMS
- Developing an edited book series on Montology, with the contract with Springer Nature/Switzerland for the production of four impending volumes.
- Organize an international symposium on Mountain Studies for the 34th ICG in Istanbul, Turkey. Launching of the edited book series on Montology
- Organize an international symposium on Mountain Studies for the IGU-Paris conference in Paris, France. 2022. Launching of the first volume of the series Montology
- Organize an international symposium on Mountain Studies for the IGU-Ecuador conference in Quito, 2023. Launching the second volume of the series Montology
- Catalyze the creation of regional organizations working as networks to promote mountain geography themes. For instance, we will facilitate and stimulate the

creation of the Latin American and Caribbean Mountain Research and Innovation Network (LACMONT) in 2020. We also helped with the organization of LACMONT first international meeting, in Brazil, May 2021.

- We are contemplating activate mountain research networks for prospective research proposals to work on ecological restoration. Our target colleagues are listed in The Mountain Research and Development (MRI), the FAO Mountain Alliance, the UNESCO World Heritage Center, the International Terraced Landscapes Alliance (ITLA), the International Network of Mountain Indigenous Peoples (INMIP) and the American Association of Geographers (AAG) Mountain Geography Specialty Group (MGSG).

The Commission of Mountain Studies promote mountain transdisciplinary studies, disseminate and exchange of knowledge and experience between researchers from different countries and scientific schools in the field of mountain geography research and outreach. Priority pillars are the strengthening of the role of geography as cross-cutting transdisciplinary montology and the scholarly exchange of knowledge between different regions of the world.

1. Closely interacting with interdisciplinary foci, developing geographic tools and promoting its use in transdisciplinary research;
2. Promoting a more balanced study of the world's mountain socio-ecological systems;
3. Informing other members about their work via networking and incubating research initiatives;
4. Establishing scholarly exchanges to allow for active recruitment of more geographers into the discipline of mountain geography;
5. Contributing to sharing wisdom and transfer of knowledge among mountain scholars of different academic backgrounds and methodological affiliations;
6. Enhancing opportunities for global engagement in active scientific networks of North-North, North-South, and South-South cooperation.
7. Advising public and private groups on the advances of Montology as a way to integrate the geographic sciences with the humanities and the arts.
8. Provide opportunities for inclusion of diverse young researchers and offer career training options for faculty and seasoned mountain researchers.

2. Communication and dissemination of research outcomes

2.1. Publications

A list of the publications of some of the CMS members on mountain issues is reported hereby:

- Ruiz-Cortés N.S., **Alcántara-Ayala I.** (2020). Landslide exposure awareness: a community-based approach towards the engagement of children. *Landslides* 17, 1501–1514, <https://doi.org/10.1007/s10346-020-01391-w>
- Pablo-Pablo M.A., Franco-Ramos O., **Alcántara-Ayala I.** (2020) Análisis de flujos de escombros desde un enfoque dendrocronológico en Ixtacamaxtitlán, Sierra Norte de Puebla, México (Debris flows analysis based on dendrochronological approach at Ixtacamaxtitlán, Sierra Norte de Puebla, Mexico), *Revista Mexicana de Ciencias Geológicas*, 37, 2, 109-120. DOI: 10.22201/cgeo.20072902e.2020.2.1556
- Adler, C., Balsiger, J., Grêt-Regamey, A., Heinimann, A., Huggel, C., Weingartner, R., **Alcántara-Ayala, I.**, Gebrekirstos, A., Grau, R., Jimenez Zamora, E., Marchant, R., Mark, B., Marshall, S., Morin, S., Shahgedanova, M., Singh Shrestha, M., Xu, J. (2020). Making Connections for Our Changing Mountains: Future directions for the Mountain Research Initiative (MRI). *Mountain Research and Development*, 40(1): 1-6. <https://doi.org/10.1659/MRD-JOURNAL-D-20-00045.1>
- Alcántara- Ayala I.**, Asefaw Berhe A., Derry L., Ganti V., Horton A.A., & Sub Sim M. (2021) Reflections on Earth surface research, *Nature Reviews Earth & Environment* 2, 15–20.
- Garnica-Peña R.J., **Alcántara-Ayala I.** (2021) The use of UAVs for landslide disaster risk research and disaster risk management: a literature review. *Journal of Mountain Science* 18(2): 482-498, <https://doi.org/10.1007/s11629-020-6467-7>
- Cardona Arboleda O.D., Carreño Tibaduiza M.L., Mendes Arraiol K.C, **Alcántara-Ayala I.**, Saito S.M. (2020) Slope Instability and Landslides. In: *Adaptation to Climate Change Risks in Ibero-American Countries — RIOCCADAPT Report* [Moreno, J.M., C. Laguna-Defior, V. Barros, E. Calvo Buendía, J.A. Marengo y U. Oswald Spring (eds.)], McGraw Hill, Madrid, Spain (pp. 398-434, ISBN 9788448621667).
- Branca, D. & **A. Haller** (2021): Cusco: profile of an Andean city. In: *Cities* 113, pp. 1–15. <https://doi.org/10.1016/j.cities.2021.103169>
- Haller, A.** & D. Branca (2020): Montología: una perspectiva de montaña hacia la investigación transdisciplinaria y el desarrollo sustentable. In: *Revista de Investigaciones Altoandinas* 22 (4), pp. 313–322. <https://doi.org/10.18271/ria.2020.193>
- Polderman, A., **A. Haller**, D. Viesi, X. Tabin, S. Sala, A. Giorgi, L. Darmayan, J. Rager,

-
- J. Vidovic, Q. Daragon, Y. Verchère, U. Zupan, N. Houbé, K. Heinrich, O. Bender & Y. Bidault (2020): How can ski resorts get smart? Transdisciplinary approaches to sustainable winter tourism in the European Alps. In: Sustainability 12 (14), pp. 5593. <https://doi.org/10.3390/su12145593>
- Haller, A.**, W. Andexlinger & O. Bender (2020): City profile: Innsbruck. In: Cities 97, pp. 1–10. <https://doi.org/10.1016/j.cities.2019.102497>
- Nakileza, B.** I co-authored a paper on Modeling the glaciers on the Rwenzori Mountain <[https://doi.org/10.1130/2020.2548\(09\)](https://doi.org/10.1130/2020.2548(09))>. and another on Topographic influence of landslide characteristics and implications for Risk Management in Mt. Elgon <<https://doi.org/10.1186/s40677-020-00160-0>>.
- WE also participated in the International Year of Mountains Online interactions with UN Mountain Partnership and The University community from Western Colorado University. I am currently involved in drafting the Mountain Research Strategy in Uganda.
- Sarmiento, F.O.** 2021. Critical Biogeography of Neotropical Mountains: A Panoptic Approach for Biocultural Microrefugia Conservation. *Biodiversity Online*, 1(3): 1-7. <https://crimsonpublishers.com/boj/pdf/BOJ.000515.pdf>
- Sarmiento, F.O.**, M. Oliva and S. Fernandez. 2021. Montology: Transformative frame for education about mountains. *Mountain Research and Development*, 40(4) <https://doi.org/10.1659/MRD-JOURNAL-D-20-00031.1>
- Sarmiento, F.O** y E.V. Sarmiento. 2021. *Flancos Andinos: Paleoecología, Biogeografía Crítica y Ecología Política en los Climats Cambiantes de los Bosques Neotropicales de Montaña*. Editorial INDES_CES/UNTRM. Universidad Nacional Toribio Rodríguez de Mendoza, Amazonas. Chachapoyas, Peru. <https://www.doi.org/10.5281/zenodo.4746912>
- Sarmiento, F.O. and** Larry M. Frolich (editors). 2020. *The Elgar Companion to Geography, Transdisciplinarity and Sustainability*. Edward Elgar Publishing. Glos, UK and Massachusetts, USA. 428pp. <https://doi.org/10.4337/9781786430106>
- Sarmiento, F.O.** 2020. Montology Manifesto: echoes towards a transdisciplinary science of mountains. *Journal of Mountain Science*, 17(10): 2512-2527. <https://doi.org/10.1007/s11629-019-5536-2>.
- Sarmiento FO**, Frolich LM, editors. The Elgar Companion to Geography, Transdisciplinarity and Sustainability. Edward Elgar Publishing; 2020 May 29.
- Schirpke U., Scolozzi R., Dean G., Haller A., Jäger H., Kister, J., Kovács B., **Sarmiento, F.O.**, Sattler B and C. Schleyer. 2020. Cultural ecosystem services on mountain regions: Conceptualising conflicts among users and limitations of use. *Ecosystem Services*, 46. <https://doi.org/10.1016/j.ecoser.2020.101210>
- Rojas, N., D.A. Cotrina, E. Barboza, M. Barrena, **F.O. Sarmiento**, D.A. Sotomayor, M.

Oliva and R. Salas. 2020. Current and future distribution of five timber forest species in Amazonas, Northeast Peru: Contributions towards a restoration strategy. *Diversity*, 12, 305. <https://doi.org/10.3390/d12080305>

Sarmiento, F.O., M.B. Bush, W. Church, P. VanValkenburgh, M. Oliva, E. Delgado, S. Fernandez and N. Rojas. 2020. Mountain science poised to help ecotourism in Peruvian cloud forests. *PAGES* 28(1), 22-23.

<https://doi.org/10.22498/pages.28.1.22>

Sarmiento, F.O. and G. Kooperman. 2019. A Socio-Hydrological Perspective on Recent and Future Precipitation Changes Over Tropical Montane Cloud Forests in the Andes. *Frontiers in Earth Sciences*, 7, Article 324.

<https://doi.org/10.3389/feart.2019.00324>

Sarmiento, F.O., J.A. Gonzalez, E.O. Lavilla, M. Donoso and J.T. Ibarra. 2019. Onomastic misnomers in the construction of faulty Andeanity and weak Andeaness: Biocultural Microrefugia in the Andes. *Pirineos, Journal of Mountain Ecology*, 174, 1-16.

<https://doi.org/10.3989/pirineos.2019.174009>

Pinaya, J., F. Cruz, G. Ceccantini, P. Corrêa, N. Pitman, F. Vemado, M. Lopez, A. Pereira, C. Grohmann, C. Chiessi, N. Strikis, I. Horák-Terra, W. Pinaya, V. de Medeiros, R. Santos, T. Akabane, M. Silva, R. Cheddadi, M. Bush, A-J. Henrot, L. François, A. Hambuckers, F. Boyer, M. Carré, E. Coissac, F. Ficetola, K. Huang, A-M. Lézine, M. Nourelbait, A. Rhoujjati, P. Taberlet, **F.O. Sarmiento**, D. Abel-Schaad, F. Alba-Sánchez, Z. Zheng, P. de Oliveira. 2019. Brazilian montane rainforests expansion induced by Heinrich Stadial 1 event. *Nature Scientific Reports*, 9, Article 17912.

<https://doi.org/10.1038/s41598-019-53036-1>

Sarmiento, F.O. and C. Cotacachi. 2019. Framing Cultural Ecosystem Services in the Andes: Utawallu runakuna as Sentinels of Values for Biocultural Heritage Conservation. *Satoyama Review*, 5(1), 25-40.

Subramanian, S. M., Yiu, E., Dasgupta, R., Takahashi, Y., Deja, E., Dublin, D., Natori, Y., **Sarmiento, F.O.**, Osei-Owusu, Y., Quintero-Ángel, A., San Vicente-Tello, A., Díaz-Varela, E., Díaz-Varela, R.A., Titumir, R. Al M., Karimova, P.G., Lee, K.C., Ojelel, S., Lacaste, A.V., Belegal, J.A.C., Edake, S., Guibrinet, L., Kubo, H., Nishi, M., and R. Kozar. 2019. How multiple values influence decisions on sustainable use in socio-ecological production landscapes and seascapes. *Satoyama Review*, 5, 1-15.

Minga, D., Cordero, P., Donoso, M., Montesinos, K., Jimenez, M., Antaki, B. and **Sarmiento, F.O.** 2019. The Uchucay microrefugium: an Interandean forest relict with an important arboreal richness in Southern Ecuador. *Pirineos, Journal of Mountain Ecology*, 174, 1-16.

<https://doi.org/10.3989/pirineos.2019.174007>

-
- Sarmiento, F.O.,** J.T. Ibarra, A. Barreau, C. Marchant, J. González, M. Oliva and M. Donoso. 2019. Montology: A research agenda for complex foodscapes and biocultural microrefugia in tropical and temperate Andes. *Journal of Agriculture, Food and Development*, 5, 9-21.
<https://doi.org/10.30635/2415-0142.2019.05.2>
- Koehler J, **Gunya A**, Shogenov M, Tumov A. Violence and the Dynamics of Political Settlements in Post-Soviet Kabardino-Balkaria. *Perspectives on Terrorism*. 2020 Apr 1;14(2):93-111.
- Shogenov M, **Gunya A**, Chechenov A. Exploring Civil Society in the North-Western Caucasus: The State, Local Government, and Communities on a Convolutional Path toward Social Stability. *Demokratizatsiya: The Journal of Post-Soviet Democratization*. 2020;28(2):269-303.
- Bausch T, Schröder T, **Gunya A**. Pilgrimage as a field of tourism development: the case of Kavala (Northern Greece) and its institutional and cultural challenges. *International Journal of Religious Tourism and Pilgrimage*. 2020;8(3).
- Gunya A**. Opportunities, and risks of the Chinese initiative «New Silk Road» for Russia's development / AN **Gunya**, AB Efimov // *Cultural heritage of Russia*. 2019. P. 3-8
- Ibarra JT**, Cockle K, Altamirano T, van der Hoek Y, Simard S, Bonacic C, Martin K. Nurturing resilient forest biodiversity: nest webs as complex adaptive systems. *Ecology and Society*. 2020 Jun 30;25(2).
- Ibarra JT**, Caviedes J, Benavides P. Winged voices: Mapuche ornithology from South American temperate forests. *Journal of Ethnobiology*. 2020 Apr;40(1):89-100.
- Dayer AA, Silva-Rodríguez EA, Albert S, Chapman M, Zukowski B, **Ibarra JT**, Gifford G, Echeverri A, Martínez-Salinas A, Sepúlveda-Luque C. Applying conservation social science to study the human dimensions of Neotropical bird conservation. *The Condor*. 2020 Aug 4;122(3):duaa021.
- Altamirano TA, de Zwaan DR, **Ibarra JT**, Wilson S, Martin K. Treeline ecotones shape the distribution of avian species richness and functional diversity in south temperate mountains. *Scientific reports*. 2020 Oct 28;10(1):1-3.
- Vazquez MS, **Ibarra JT**, Altamirano TA. Austral Opossum adjusts to life in second-growth forests by nesting outside cavities. *Austral Ecology*. 2020 Dec;45(8):1179-82.
- Almuna R, Cruz JM, Vargas FH, **Ibarra JT**. Landscapes of coexistence: generating predictive risk models to mitigate human-raptor conflicts in forest socio-ecosystems. *Biological Conservation*. 2020 Nov 1;251:108795.

-
- Bonaparte EB, **Ibarra JT**, Cockle KL. Conserving nest trees used by cavity-nesting birds from endangered primary Atlantic forest to open farmland: Increased relevance of excavated cavities in large dead trees on farms. *Forest Ecology and Management*. 2020 Nov 1;475:118440.
- Ojeda V, Schaaf A, Altamirano TA, Bonaparte B, Bragagnolo L, Chazarreta L, Cockle K, Dias R, Di Sallo F, **Ibarra JT**, Ippi S. Latitude does not influence cavity entrance orientation of South American avian excavators. *The Auk*. 2021 Jan 7.
- Aksha SK, **Resler LM**, Juran L, Carstensen Jr LW. A geospatial analysis of multi-hazard risk in Dharan, Nepal. *Geomatics, Natural Hazards and Risk*. 2020 Jan 1;11(1):88-111.
- Bader MY, Llambí LD, Case BS, Buckley HL, Toivonen JM, Camarero JJ, Cairns DM, Brown CD, Wiegand T, **Resler LM**. A global framework for linking alpine-treeline ecotone patterns to underlying processes. *Ecography*. 2021 Feb;44(2):265-92.
- Resler LM**, Fry JT, Leman S, Jelesko JG. Assessing poison ivy (*Toxicodendron radicans*) presence and functional traits in relation to land cover and biophysical factors. *Physical Geography*. 2021 Feb 18:1-24.
- Jensen D, Mahoney A, **Resler L**. The annual cycle of landfast ice in the eastern Bering Sea. *Cold Regions Science and Technology*. 2020 Jun 1;174:103059.
- Resler LM**, Shao Y, Campbell JB, Michaels A. Land cover and land use change in an emerging national park gateway region: Implications for mountain sustainability. In: *The Elgar Companion to Geography, Transdisciplinarity and Sustainability* 2020 May 7. Edward Elgar Publishing.
- Ramírez N, Melfo A, **Resler LM**, Llambí LD. The end of the eternal snows: Integrative mapping of 100 years of glacier retreat in the Venezuelan Andes. *Arctic, Antarctic, and Alpine Research*. 2020 Jan 1;52(1):563-81.
- Lambert CB, **Resler LM**, Shao Y, Butler DR. Vegetation change as related to terrain factors at two glacier forefronts, Glacier National Park, Montana, USA. *Journal of Mountain Science*. 2020 Jan;17(1):1-5.
- Kaniewski D, Marriner N, **Cheddadi R**, Fischer PM, Otto T, Luce F, Van Campo E. Climate change and social unrest: A 6,000-year chronicle from the eastern Mediterranean. *Geophysical Research Letters*. 2020 Apr 16;47(7):e2020GL087496.
- Cheddadi R**, Carré M, Nourelbait M, François L, Rhoujjati A, Manay R, Ochoa D, Schefuß E. Early Holocene greening of the Sahara requires Mediterranean winter rainfall. *Proceedings of the National Academy of Sciences*. 2021 Jun 8;118(23).

-
- Kaniewski D, Marriner N, **Cheddadi R**, Morhange C, Ontiveros MÁ, Fornós JJ, Giaime M, Trichon V, Otto T, Luce F, Van Campo E. Recent anthropogenic climate change exceeds the rate and magnitude of natural Holocene variability on the Balearic Islands. *Anthropocene*. 2020 Dec 1;32:100268.
- El Hasnaoui Y, Mhammdi N, Bajolle L, Nourelbait M, Bouimetarhan I, **Cheddadi R**. Locating North African microrefugia for mountain tree species from landscape ruggedness and fossil records. *Journal of African Earth Sciences*. 2020 Dec 1;172:103996.
- Cheddadi R**. Past climate changes and the role of refugia in the temperate Northern Hemisphere. *Past Global Changes Magazine*. 2020 Apr;28(1).
- Cheddadi R**. How the Asian subtropical area became evergreen since the Last Glacial Maximum. *Past Global Changes Magazine*. 2020 Apr;28(1).
- Cheddadi R**, Sarmiento FO, Hambuckers A, Rhoujjati A, Taberlet P, Ficetola F, Henrot AJ, François L, Boyer F, Nourelbait M. Multidisciplinary approaches for conservation issues. In *The Elgar Companion to Geography, Transdisciplinarity and Sustainability* 2020 May 7. Edward Elgar Publishing.
- Cheddadi R**. Past plant diversity changes and future conservation issues. *PAST PLANT DIVERSITY AND CONSERVATION*. 2020 Apr;3.
- Boillat S**, Bottazzi P. Agroecology as a pathway to resilience justice: peasant movements and collective action in the Niayes coastal region of Senegal. *International journal of sustainable development & world ecology*. 2020 Oct 2;27(7):662-77.
- Boillat S**, Martin A, Adams T, Daniel D, Llopis J, Zepharovich E, Oberlack C, Sonderegger G, Bottazzi P, Corbera E, Ifejika Speranza C. Why telecoupling research needs to account for environmental justice. *Journal of land use science*. 2020 Jan 2;15(1):1-0.
- Ramutsindela M, Guyot S, **Boillat S**, Giraut F, Bottazzi P. The geopolitics of protected areas. *Geopolitics*. 2020 Jan 1;25(1):240-66.
- Bottazzi P, **Boillat S**, Marfurt F, Seck SM. Channels of Labour Control in Organic Farming: Toward a Just Agroecological Transition for Sub-Saharan Africa. *Land*. 2020 Jun;9(6):205.
- Boillat S**. 2020. Decolonizing ecological knowledge: transdisciplinary ecology, place making and cognitive justice in the Andes. In: *The Elgar Companion to Geography, Transdisciplinarity and Sustainability* 2020 May 7. Edward Elgar Publishing.
- Bottazzi P, **Boillat S**, Marfurt F, Seck SM. Climate change adaptation through

agroecology in Senegal: Enhanced farmworkers' autonomy or new forms of vertical labour control?. In *Climate Change in the Global Workplace* 2021 May 3 (pp. 32-48). Routledge.

Ueno K, Balsiger J, Price MF. Education for sustainable mountain development: preliminary insights from a web-based survey of opportunities. *Mountain Research and Development*. 2020 Nov;40(4):R1.

Sawada M, **Ueno K**. Heavy Winter Precipitation Events with Extratropical Cyclone Diagnosed by GPM Products and Trajectory Analysis. *Journal of the Meteorological Society of Japan*. Ser. II. 2021.

Ueno, K., 2021. A Study on the Relation Between Residential Land Value and the Distance to the Center of the Tokyo Metropolitan Area (1970–2016). *Frontiers of Real Estate Science in Japan*, p.181.

Ueno K, Sawada M. Heavy winter precipitation events with extratropical cyclone diagnosed by GPM products and trajectory analysis. *Copernicus Meetings*; 2021 Mar 3.

Nhu VH, Shirzadi A, Shahabi H, Chen W, Clague JJ, **Geertsema M**, Jaafari A, Avand M, Miraki S, Talebpour Asl D, Pham BT. Shallow landslide susceptibility mapping by random forest base classifier and its ensembles in a semi-arid region of Iran. *Forests*. 2020 Apr;11(4):421.

Shahabi H, Shirzadi A, Ghaderi K, Omidvar E, Al-Ansari N, Clague JJ, **Geertsema M**, Khosravi K, Amini A, Bahrami S, Rahmati O. Flood detection and susceptibility mapping using sentinel-1 remote sensing data and a machine learning approach: Hybrid intelligence of bagging ensemble based on k-nearest neighbor classifier. *Remote Sensing*. 2020 Jan;12(2):266.

Fan X, Dufresne A, Subramanian SS, Strom A, Hermanns R, Stefanelli CT, Hewitt K, Yunus AP, Dunning S, Capra L, **Geertsema M**. The formation and impact of landslide dams–State of the art. *Earth-Science Reviews*. 2020 Apr 1;203:103116.

Shahabi H, Shirzadi A, Ronoud S, Asadi S, Pham BT, Mansouripour F, **Geertsema M**, Clague JJ, Bui DT. Flash flood susceptibility mapping using a novel deep learning model based on deep belief network, back propagation and genetic algorithm. *Geoscience Frontiers*. 2021 May 1;12(3):101100.

Schmidt M, Soentgen J, Zapf H. Environmental humanities: an emerging field of transdisciplinary research. *GAIA-Ecological Perspectives for Science and Society*. 2020 Dec 16;29(4):225-9.

Schmidt MS, Schulze-Koops H, Venhoff N, Witte T, Zänker M. Mitwirkende Organisation/Fachgesellschaft.

-
- Wang J, Howarth JD, McClymont EL, Densmore AL, **Fitzsimons SJ**, Croissant T, Gröcke DR, West MD, Harvey EL, Frith NV, Garnett MH. Long-term patterns of hillslope erosion by earthquake-induced landslides shape mountain landscapes. *Science advances*. 2020 Jun 1;6(23):eaaz6446.
- Howarth JD, Barth NC, **Fitzsimons SJ**, Richards-Dinger K, Clark KJ, Biasi GP, Cochran UA, Langridge RM, Berryman KR, Sutherland R. Spatiotemporal clustering of great earthquakes on a transform fault controlled by geometry. *Nature Geoscience*. 2021 May;14(5):314-20.
- Fitzsimons S**, Howarth J. Development of push moraines in deeply frozen sediment adjacent to a cold-based glacier in the McMurdo Dry Valleys, Antarctica. *Earth Surface Processes and Landforms*. 2020 Mar 15;45(3):622-37.
- Howarth J, **Fitzsimons S**, Hilton R, Moody A, Croissant T, Wang J, Densmore A, McClymont E. Reconstructing post-earthquake sediment cascades in mountain landscapes from the sedimentary record. *Copernicus Meetings*; 2021 Mar 3.
- Wang J, Howarth J, McClymont E, Densmore A, **Fitzsimons S**, Croissant T, Gröcke D, West M, Harvey E, Frith N, Garnett M. Temporal shifts in erosion provenance through multiple earthquake cycles. *InEGU General Assembly Conference Abstracts 2020 May* (p. 9817).
- Zafra-Calvo N, Balvanera P, Pascual U, Merçon J, Martín-López B, van Noordwijk M, Mwampamba TH, Lele S, Speranza CI, Arias-Arévalo P, Cabrol D, **Subramanian S**. Plural valuation of nature for equity and sustainability: Insights from the Global South. *Global environmental change*. 2020 Jul 1;63:102115.
- Díaz S, Zafra-Calvo N, Purvis A, Verburg PH, Obura D, Leadley P, Chaplin-Kramer R, De Meester L, Dulloo E, Martín-López B, Shaw MR, **Subramanian SM**. Set ambitious goals for biodiversity and sustainability. *Science*. 2020 Oct 23;370(6515):411-3.
- Kozar R, Galang E, Sedhain J, Alip A, **Subramanian SM**, Saito O. Place-Based Solutions for Conservation and Restoration of Social-Ecological Production Landscapes and Seascapes in Asia. In: *Managing Socio-ecological Production Landscapes and Seascapes for Sustainable Communities in Asia 2020* (pp. 117-146). Springer, Singapore.
- Dunbar W, **Subramanian SM**, Matsumoto I, Natori Y, Dublin D, Bergamini N, Mijatovic D, Álvarez AG, Yiu E, Ichikawa K, Morimoto Y. Lessons Learned from Application of the “Indicators of Resilience in Socio-ecological Production Landscapes and Seascapes (SEPLS)” Under the Satoyama Initiative. In *Managing Socio-ecological Production Landscapes and Seascapes for Sustainable Communities in Asia 2020* (pp. 93-116). Springer, Singapore.

Saito O, **Subramanian SM**, Hashimoto S, Takeuchi K. Introduction: Socio-ecological Production Landscapes and Seascapes. In *Managing Socio-ecological Production Landscapes and Seascapes for Sustainable Communities in Asia 2020* (pp. 1-10). Springer, Singapore.

Nishi M, **Subramanian SM**, Gupta H, Yoshino M, Takahashi Y, Miwa K, Takeda T. Synthesis: Conception, Approaches and Strategies for Transformative Change. Maiko Nishi · Suneetha M. Subramanian Himangana Gupta · Madoka Yoshino Yasuo Takahashi · Koji Miwa. 2021:229.

Nishi M, **Subramanian SM**, Gupta H, Yoshino M, Takahashi Y, Miwa K, Takeda T. Fostering Transformative Change for Sustainability in the Context of Socio-Ecological Production Landscapes and Seascapes (SEPLS).

Gönençgil B. Evaluate Turkey's climate classification by clustering analysis method. In: *Smart geography 2020* (pp. 41-53). Springer, Cham.

Gönençgil B, Acar Z. Turkey: Climate Variability, Extreme Temperature, and Precipitation. In: *Geographies of Mediterranean Europe 2021* (pp. 167-180). Springer, Cham.

Gönençgil B, Acar Z. Turkey: Climate Variability, Extreme Temperature, and Precipitation. In: *Geographies of Mediterranean Europe 2021* (pp. 167-180). Springer, Cham.