

## Publications

Over 50 international peer-reviewed publications (source Google Scholar) with + 1500 citations, h-index 20, i10-index 31. Currently I have 8 manuscripts under review in journals that are ISI indexed.

**Scopus** (Export Date: 10 Aug 2018 Search: AU-ID("Borrelli, Pasquale" 55550687100))

## Selected Publications

**Borrelli**, P., Robinson, D.A., Fleischer, L.R., Lugato, E., Ballabio, C., Alewell, C., Meusburger, K., Modugno, S., Schütt, B., Ferro, V., Bagarello, V., Oost, K.V., Montanarella, L., Panagos, P. An assessment of the global impact of 21st century land use change on soil erosion (2017) *Nature Communications*, 8 (1), art. no. 20131.

**Borrelli**, P., Panagos, P., Lugato, E., Alewell, C., Ballabio, C., Montanarella, L., Robinson, D.A. Lateral carbon transfer from erosion in noncroplands matters (2018) *Global Change Biology*, 24 (8), pp. 3283-3284.

Lugato, E., Paustian, K., Panagos, P., Jones, A., **Borrelli**, P. Quantifying the erosion effect on current carbon budget of European agricultural soils at high spatial resolution (2016) *Global Change Biology*, 22 (5), pp. 1976-1984.

Panagos, P., **Borrelli**, P., Robinson, D.A. Common Agricultural Policy: Tackling soil loss across Europe (2015) *Nature*, 526 (7572), p. 195.

## 2018

1. Lugato, E., Smith, P., **Borrelli**, P., Panagos, P., Ballabio, Orgiazzi, A., Fernandez-Ugalde, O., Montanarella, L., Jones. 2018. Soil erosion is unlikely to drive a significant future carbon sink in Europe. *Science Advances*. (in press).
2. Ballabio, C., Panagos, P., Lugato, E., Huang, J.-H., Orgiazzi, A., Jones, A., Fernández-Ugalde, O., **Borrelli**, P., Montanarella, L. Copper distribution in European topsoils: An assessment based on LUCAS soil survey (2018) *Science of the Total Environment*, 636, pp. 282-298.
3. **Borrelli**, P., Panagos, P., Lugato, E., Alewell, C., Ballabio, C., Montanarella, L., Robinson, D.A. Lateral carbon transfer from erosion in noncroplands matters (2018) *Global Change Biology*, 24 (8), pp. 3283-3284.
4. Panagos, P., Ballabio, C., Lugato, E., Jones, A., **Borrelli**, P., Scarpa, S., Orgiazzi, A., Montanarella, L. Potential sources of anthropogenic copper inputs to European agricultural soils (2018) *Sustainability (Switzerland)*, 10 (7), art. no. 2380.
5. Diodato, N., Mao, L., **Borrelli**, P., Panagos, P., Fiorillo, F., Bellocchi, G. Climate-scale modelling of suspended sediment load in an Alpine catchment debris flow (Rio Cordon-northeastern Italy) (2018) *Geomorphology*, 309, pp. 20-28.
6. **Borrelli**, P., Meusburger, K., Ballabio, C., Panagos, P., Alewell, C. Object-oriented soil erosion modelling: A possible paradigm shift from potential to actual risk assessments in agricultural environments (2018) *Land Degradation and Development*, 29 (4), pp. 1270-1281.
7. Panagos, P., Standardi, G., **Borrelli**, P., Lugato, E., Montanarella, L., Bosello, F. Cost of agricultural productivity loss due to soil erosion in the European Union: From direct cost evaluation approaches to the use of macroeconomic models (2018) *Land Degradation and Development*, 29 (3), pp. 471-484.
8. **Borrelli**, P., Van Oost, K., Meusburger, K., Alewell, C., Lugato, E., Panagos, P. A step towards a holistic assessment of soil degradation in Europe: Coupling on-site erosion with sediment transfer and carbon fluxes (2018) *Environmental Research*, 161, pp. 291-298.

## 2017

9. Yin, S., Nearing, M.A., **Borrelli**, P., Xue, X. Rainfall erosivity: An overview of methodologies and applications (2017) *Vadose Zone Journal*, 16 (12), 16 p.
10. Robinson, D.A., Panagos, P., **Borrelli**, P., Jones, A., Montanarella, L., Tye, A., Obst, C.G. Soil natural capital in Europe; A framework for state and change assessment (2017) *Scientific Reports*, 7 (1), art. no. 6706.
11. **Borrelli**, P., Robinson, D.A., Fleischer, L.R., Lugato, E., Ballabio, C., Alewell, C., Meusburger, K., Modugno, S., Schütt, B., Ferro, V., Bagarello, V., Oost, K.V., Montanarella, L., Panagos, P. An assessment of the global impact of 21st century land use change on soil erosion (2017) *Nature Communications*, 8 (1), art. no. 20131.
12. Panagos, P., **Borrelli**, P., Meusburger, K., Yu, B., Klik, A., Lim, K.J., Yang, J.E., Ni, J., Miao, C., Chattopadhyay, N., Sadeghi, S.H., Hazbavi, Z., Zabihi, M., Larionov, G.A., Krasnov, S.F., Gorobets, A.V., Levi, Y., Erpul, G., Birkel, C., Hoyos, N., Naipal, V., Oliveira, P.T.S., Bonilla, C.A., Meddi, M., Nel, W., Al Dashti, H., Boni, M., Diodato, N., Van Oost, K., Nearing, M., Ballabio, C. Global rainfall erosivity assessment based on high-temporal resolution rainfall records (2017) *Scientific Reports*, 7 (1), art. no. 4175.
13. Nearing, M.A., Yin, S.-Q., **Borrelli**, P., Polyakov, V.O. Rainfall erosivity: An historical review (2017) *Catena*, 157, pp. 357-362.
14. Panagos, P., Ballabio, C., Meusburger, K., Spinoni, J., Alewell, C., **Borrelli**, P. Towards estimates of future rainfall erosivity in Europe based on REDES and WorldClim datasets (2017) *Journal of Hydrology*, 548, pp. 251-262.
15. **Borrelli**, P., Panagos, P., Märker, M., Modugno, S., Schütt, B. Assessment of the impacts of clear-cutting on soil loss by water erosion in Italian forests: First comprehensive monitoring and modelling approach (2017) *Catena*, 149, pp. 770-781.
16. Ballabio, C., **Borrelli**, P., Spinoni, J., Meusburger, K., Michaelides, S., Beguería, S., Klik, A., Petan, S., Janeček, M., Olsen, P., Aalto, J., Lakatos, M., Rymaszewicz, A., Dumitrescu, A., Tadić, M.P., Diodato, N., Kostalova, J., Rousseva, S., Banasik, K., Alewell, C., Panagos, P. Mapping monthly rainfall erosivity in Europe (2017) *Science of the Total Environment*, 579, pp. 1298-1315.
17. **Borrelli**, P., Lugato, E., Montanarella, L., Panagos, P. A New Assessment of Soil Loss Due to Wind Erosion in European Agricultural Soils Using a Quantitative Spatially Distributed Modelling Approach (2017) *Land Degradation and Development*, 28 (1), pp. 335-344.
18. Diodato, N., **Borrelli**, P., Fiener, P., Bellocchi, G., Romano, N. Discovering historical rainfall erosivity with a parsimonious approach: A case study in Western Germany (2017) *Journal of Hydrology*, 544, pp. 1-9.

## 2016

19. **Borrelli**, P., Diodato, N., Panagos, P. Rainfall erosivity in Italy: a national scale spatio-temporal assessment (2016) *International Journal of Digital Earth*, 9 (9), pp. 835-850.
20. Panagos, P., Imeson, A., Meusburger, K., **Borrelli**, P., Poesen, J., Alewell, C. Soil Conservation in Europe: Wish or Reality? (2016) *Land Degradation and Development*, 27 (6), pp. 1547-1551.
21. Modugno, S., Balzter, H., Cole, B., **Borrelli**, P. Mapping regional patterns of large forest fires in Wildland-Urban Interface areas in Europe (2016) *Journal of Environmental Management*, 172, pp. 112-126.
22. Lugato, E., Paustian, K., Panagos, P., Jones, A., **Borrelli**, P. Quantifying the erosion effect on current carbon budget of European agricultural soils at high spatial resolution (2016) *Global Change Biology*, 22 (5), pp. 1976-1984.
23. **Borrelli**, P., Panagos, P., Ballabio, C., Lugato, E., Weynants, M., Montanarella, L. Towards a Pan-European Assessment of Land Susceptibility to Wind Erosion (2016) *Land Degradation and Development*, 27 (4), pp. 1093-1105.

24. Panagos, P., **Borrelli**, P., Poesen, J., Meusburger, K., Ballabio, C., Lugato, E., Montanarella, L., Alewell, C. Reply to "The new assessment of soil loss by water erosion in Europe. Panagos P. et al., 2015 Environ. Sci. Policy 54, 438-447-A response" by Evans and Boardman [Environ. Sci. Policy 58, 11-15] (2016) Environmental Science and Policy, 59, pp. 53-57.
25. Panagos, P., **Borrelli**, P., Poesen, J., Meusburger, K., Ballabio, C., Lugato, E., Montanarella, L., Alewell, C. Reply to the comment on "The new assessment of soil loss by water erosion in Europe" by Fiener & Auerwald (2016) Environmental Science and Policy, 57, pp. 143-150.
26. Panagos, P., Ballabio, C., **Borrelli**, P., Meusburger, K. Spatio-temporal analysis of rainfall erosivity and erosivity density in Greece (2016) Catena, 137, pp. 161-172.
27. **Borrelli**, P., Panagos, P., Langhammer, J., Apostol, B., Schütt, B. Assessment of the cover changes and the soil loss potential in European forestland: First approach to derive indicators to capture the ecological impacts on soil-related forest ecosystems (2016) Ecological Indicators, 60, pp. 1208-1220.
28. **Borrelli**, P., Paustian, K., Panagos, P., Jones, A., Schütt, B., Lugato, E. Effect of Good Agricultural and Environmental Conditions on erosion and soil organic carbon balance: A national case study (2016) Land Use Policy, 50, pp. 408-421.
29. Panagos, P., **Borrelli**, P., Spinoni, J., Ballabio, C., Meusburger, K., Beguería, S., Klik, A., Michaelides, S., Petan, S., Hrabalíková, M., Olsen, P., Aalto, J., Lakatos, M., Rymaszewicz, A., Dumitrescu, A., Tadić, M.P., Diodato, N., Kostalova, J., Rousseva, S., Banasik, K., Alewell, C. Monthly rainfall erosivity: Conversion factors for different time resolutions and regional assessments (2016) Water (Switzerland), 8 (4), art. no. 119.

## 2015

30. Panagos, P., **Borrelli**, P., Poesen, J., Ballabio, C., Lugato, E., Meusburger, K., Montanarella, L., Alewell, C. The new assessment of soil loss by water erosion in Europe (2015) Environmental Science and Policy, 54, pp. 438-447.
31. Panagos, P., **Borrelli**, P., Meusburger, K., Alewell, C., Lugato, E., Montanarella, L. Estimating the soil erosion cover-management factor at the European scale (2015) Land Use Policy, 48, pp. 38-50.
32. Panagos, P., Meusburger, K., Ballabio, C., **Borrelli**, P., Beguería, S., Klik, A., Rymaszewicz, A., Michaelides, S., Olsen, P., Tadić, M.P., Aalto, J., Lakatos, M., Dumitrescu, A., Rousseva, S., Montanarella, L., Alewell, C. Reply to the comment on "Rainfall erosivity in Europe" by Auerwald et al. (2015) Science of the Total Environment, 532, pp. 853-857.
33. Panagos, P., **Borrelli**, P., Robinson, D.A. Common Agricultural Policy: Tackling soil loss across Europe (2015) Nature, 526 (7572), p. 195.
34. Panagos, P., **Borrelli**, P., Meusburger, K., van der Zanden, E.H., Poesen, J., Alewell, C. Modelling the effect of support practices (P-factor) on the reduction of soil erosion by water at European scale (2015) Environmental Science and Policy, 51, pp. 23-34.
35. Panagos, P., Ballabio, C., **Borrelli**, P., Meusburger, K., Klik, A., Rousseva, S., Tadić, M.P., Michaelides, S., Hrabalíková, M., Olsen, P., Aalto, J., Lakatos, M., Rymaszewicz, A., Dumitrescu, A., Beguería, S., Alewell, C. Rainfall erosivity in Europe (2015) Science of the Total Environment, 511, pp. 801-814.
36. **Borrelli**, P., Panagos, P., Montanarella, L. New insights into the geography and modelling of wind erosion in the European agricultural land. Application of a spatially explicit indicator of land susceptibility to wind erosion (2015) Sustainability (Switzerland), 7 (7), pp. 8823-8836.
37. Panagos, P., **Borrelli**, P., Meusburger, K. A new European slope length and steepness factor (LS-factor) for modeling soil erosion by water (2015) Geosciences (Switzerland), 5 (2), pp. 117-126.
38. **Borrelli**, P., Märker, M., Schütt, B. Modelling Post-Tree-Harvesting soil erosion and sediment deposition potential in the turano river basin (Italian central apennine) (2015) Land Degradation and Development, 26 (4), pp. 356-366.
39. **Borrelli**, P., Armenteras, D., Panagos, P., Modugno, S., Schütt, B. The implications of fire management in the andean paramo: A preliminary assessment using satellite remote sensing (2015) Remote Sensing, 7 (9), pp. 11061-11082.

## 2014

40. **Borrelli**, P., Domdey, C., Hoelzmann, P., Knitter, D., Panagos, P., Schütt, B. Geoarchaeological and historical implications of late Holocene landscape development in the Carseolani Mountains, central Apennines, Italy (2014) *Geomorphology*, 216, pp. 26-39.
41. **Borrelli**, P., Modugno, S., Panagos, P., Marchetti, M., Schütt, B., Montanarella, L. Detection of harvested forest areas in Italy using Landsat imagery (2014) *Applied Geography*, 48, pp. 102-111.
42. **Borrelli**, P., Schütt, B. Assessment of soil erosion sensitivity and post-timber-harvesting erosion response in a mountain environment of Central Italy (2014) *Geomorphology*, 204, pp. 412-424.
43. **Borrelli**, P., Märker, M., Panagos, P., Schütt, B. Modeling soil erosion and river sediment yield for an intermountain drainage basin of the Central Apennines, Italy (2014) *Catena*, 114, pp. 45-58.
44. **Borrelli**, P., Ballabio, C., Panagos, P., Montanarella, L. Wind erosion susceptibility of European soils. (2014) *Geoderma*, 232-234, pp. 471-478.
45. Panagos, P., Karydas, C., **Borrelli**, P., Ballabio, C., Meusburger, K. Advances in soil erosion modelling through remote sensing data availability at European scale (2014) *Proceedings of SPIE - The International Society for Optical Engineering*, 9229, art. no. 92290I.
46. Panagos, P., Meusburger, K., Ballabio, C., **Borrelli**, P., Alewell, C. Soil erodibility in Europe: A high-resolution dataset based on LUCAS (2014) *Science of the Total Environment*, 479-480 (1), pp. 189-200.

## 2013

47. **Borrelli**, P., Hoelzmann, P., Knitter, D., Schütt, B. Late Quaternary soil erosion and landscape development in the Apennine region (central Italy) (2013) *Quaternary International*, 312, pp. 96-108.
48. **Borrelli**, P., Sandia Rondón, L.A., Schütt, B. The use of Landsat imagery to assess large-scale forest cover changes in space and time, minimizing false-positive changes (2013) *Applied Geography*, 41, pp. 147-157.

## Non-ISI publications and abstracts

49. Borrelli, P., Alewell, C., Montanarella, L., Panagos, P. 2018. Global impacts of 21st-century land use change on soil loss by water erosion. 21st World Congress of Soil Science. Rio de Janeiro, 12 – 17 August.
50. **Borrelli**, P., Meusburger, K., Panagos, P., Ballabio, C., & Alewell, C. (2017). Spatial and temporal diversification of crops dynamics in soil erosion modelling. A case study in the arable land of the upper Enziwigger River, Switzerland. In EGU General Assembly Conference Abstracts (Vol. 19, p. 12123).
51. **Borrelli**, P., Lugato, E., Alewell, C., Montanarella, L., & Panagos, P. (2017). Advances in wind erosion modelling in Europe. In EGU General Assembly Conference Abstracts (Vol. 19, p. 12027).
52. **Borrelli**, P., et al. (2017). The new Global soil erosion assessment: a contribution to quantify erosion effect on global carbon budget. Global Symposium on Soil Organic Carbon, Food and Agriculture Organization of the United Nations (FAO), Rome, 21-23 March.
53. Panagos, P., Ballabio, C., Meusburger, K., Poesen, J., Lugato, E., Montanarella, L., ... & **Borrelli**, P. (2017). Modelling soil erosion at European scale: the importance of management practices and the future climate and land use scenarios. In EGU General Assembly Conference Abstracts (Vol. 19, p. 6342).
54. Panagos, P., **Borrelli**, P., Meusburger, K., Alewell, C., & Ballabio, C. (2017). Seasonal variation and climate change impact in Rainfall Erosivity across Europe. In EGU General Assembly Conference Abstracts (Vol. 19, p. 8466).
55. **Borrelli**, P., Paustian, K., Panagos, P., Jones, A., Schütt, B., & Lugato, E. (2016). Coupling a high resolution soil erosion model with an agro-ecosystem model of SOC dynamics. An approach to assess

- the potential environmental effect of the new Common Agricultural Policy on soil degradation. In EGU General Assembly Conference Abstracts (Vol. 18, p. 8344).
56. Panagos, P., Ballabio, C., **Borrelli**, P., Meusburger, K., & Alewell, C. (2016). Rainfall Erosivity Database on the European Scale (REDES): A product of a high temporal resolution rainfall data collection in Europe. In EGU General Assembly Conference Abstracts (Vol. 18, p. 8252).
  57. Panagos, P., **Borrelli**, P., Meusburger, K., Poesen, J., Ballabio, C., Lugato, E., ... & Alewell, C. (2016). RUSLE2015: Modelling soil erosion at continental scale using high resolution input layers. In EGU General Assembly Conference Abstracts (Vol. 18, p. 8169).
  58. Lugato, E., Paustian, K., Panagos, P., Jones, A., & **Borrelli**, P. (2016). Towards a more comprehensive modelling framework to quantify vertical and lateral carbon fluxes in the agricultural soils of the EU. In EGU General Assembly Conference Abstracts (Vol. 18, p. 2822).
  59. Panagos, P., **Borrelli**, P., & Lugato, E. (2016). RUSLE2015, GIS-RWEQ and CENTURY: new modelling integration for soil loss and carbon fluxes at European scale. In EGU General Assembly Conference Abstracts (Vol. 18, p. 8338).
  60. **Borrelli**, P., Lugato, E., & Panagos, P. (2016). A pan-European quantitative assessment of soil loss by wind. In EGU General Assembly Conference Abstracts (Vol. 18, p. 8414).
  61. **Borrelli**, P., Panagos, P., Montanarella, L., et al. 2015. Soil Erosion in Europe. Global Soil Week, 2015 Berlin.
  62. **Borrelli**, P., Paustian, K., Panagos, P., Jones, A., Schütt, B., Lugato, E. 2016. Effect of EU's Common Agricultural Policies on erosion and soil organic carbon balance, Italy. AgroEnviron 2016. 10th International Symposium on Agriculture and the Environment. West Lafayette, USA.
  63. Vigiak, O., Malagó, A., Bouraoui, F., Pastori, M., **Borrelli**, P., Pistocchi, A. 2015. Impact of current conservation practices on sediment load reduction in the Danube River Basin. SWAT conference, Sardinia, Italy.
  64. **Borrelli**, P., Knitter, D., Hoelzmann, P., Schütt, B. 2012. Ancient soil erosion and landscape development in the Apennine region (Central Italy). Landscape Archaeology Conference 2012, Berlin.
  65. **Borrelli**, P., Schütt, B. 2012. Landscape sensitivity analysis for the soil erosion risk assessment of harvested coppice forest in the Italian central Apennine region. 7th Euregeo conference special volume