

ISRaD Credits

July 8, 2021

Main compilations

ISRaD has been built based on two main compilations:

- He, Y., Trumbore, S. E., Torn, M. S., Harden, J. W., Vaughn, L. J. S., Allison, S. D., & Randerson, J. T. (2016). Radiocarbon constraints imply reduced carbon uptake by soils during the 21st century. *Science*, 353(6306), 1419–1424. doi:10.1126/science.aad4273
- Mathieu, J. A., Hatté, C., Balesdent, J., & Parent, É. (2015). Deep soil carbon dynamics are driven more by soil type than by climate: a worldwide meta-analysis of radiocarbon profiles. *Global Change Biology*, 21(11), 4278–4292. doi:10.1111/gcb.13012

Studies within ISRaD

Currently there are 407 entries in ISRaD, which are from the following publications:

Abbott, M. B., & Stafford, T. W. (1996). Radiocarbon geochemistry of modern and ancient arctic lake systems, baffin island, canada. *Quaternary Research*, 45(3), 300–311. <https://doi.org/10.1006/qres.1996.0031>

Agnelli, A., Trumbore, S. E., Corti, G., & Ugolini, F. C. (2002). The dynamics of organic matter in rock fragments in soil investigated by 14 c dating and measurements of 13 c. *European Journal of Soil Science*, 53(1), 147–159. <https://doi.org/10.1046/j.1365-2389.2002.00432.x>

Aiken, G. R., Spencer, R. G. M., Striegl, R. G., Schuster, P. F., & Raymond, P. A. (2014). Influences of glacier melt and permafrost thaw on the age of dissolved organic carbon in the yukon river basin. *Global Biogeochemical Cycles*, 28(5), 525–537. <https://doi.org/10.1002/2013gb004764>

Allard, M., & Seguin, M. K. (1987). The holocene evolution of permafrost near the tree line, on the eastern coast of hudson bay (northern quebec). *Canadian Journal of Earth Sciences*, 24(11), 2206–2222. <https://doi.org/10.1139/e87-209>

Amon, R. M., & Meon, B. (2004). The biogeochemistry of dissolved organic matter and nutrients in two large arctic estuaries and potential implications for our understanding of the arctic ocean system. *Marine Chemistry*, 92(1-4), 311–330. <https://doi.org/10.1016/j.marchem.2004.06.034>

Anderson, J., & Muller, J. (1975). Palynological study of a holocene peat and a miocene coal deposit from NW borneo. *Review of Palaeobotany and Palynology*, 19(4), 291–351. [https://doi.org/10.1016/0034-6667\(75\)90049-4](https://doi.org/10.1016/0034-6667(75)90049-4)

Andersson, R. A., Kuhry, P., Meyers, P., Zebühr, Y., Crill, P., & Mörtz, M. (2011). Impacts of paleohydrological changes on n-alkane biomarker compositions of a holocene peat sequence in the eastern european russian arctic. *Organic Geochemistry*, 42(9), 1065–1075. <https://doi.org/10.1016/j.orggeochem.2011.06.020>

Andreev, A., Klimanov, V., & Sulerzhitsky, L. (1997). Younger dryas pollen records from central and southern yakutia. *Quaternary International*, 41-42, 111–117. [https://doi.org/10.1016/s1040-6182\(96\)00042-0](https://doi.org/10.1016/s1040-6182(96)00042-0)

- Andreev, A., Klimanov, V., & Sulerzhitsky, L. (2001). Vegetation and climate history of the yana river lowland, russia, during the last 6400yr. *Quaternary Science Reviews*, 20(1-3), 259–266. [https://doi.org/10.1016/s0277-3791\(00\)00118-9](https://doi.org/10.1016/s0277-3791(00)00118-9)
- Andreev, A., Tarasov, P., Klimanov, V., Melles, M., Lisitsyna, O., & Hubberten, H.-W. (2004). Vegetation and climate changes around the lama lake, taymyr peninsula, russia during the late pleistocene and holocene. *Quaternary International*, 122(1), 69–84. <https://doi.org/10.1016/j.quaint.2004.01.032>
- Anshari, G., Kershaw, A. P., Kaars, S. V. D., & Jacobsen, G. (2004). Environmental change and peatland forest dynamics in the lake sentarum area, west kalimantan, indonesia. *Journal of Quaternary Science*, 19(7), 637–655. <https://doi.org/10.1002/jqs.879>
- Anshari, G. Z., Affudin, M., Nuriman, M., Gusmayanti, E., Arianie, L., Susana, R., Nusantara, R. W., Sugardjito, J., & Rafiastanto, A. (2010). Drainage and land use impacts on changes in selected peat properties and peat degradation in west kalimantan province, indonesia. *Biogeosciences*, 7(11), 3403–3419. <https://doi.org/10.5194/bg-7-3403-2010>
- Anthony, K. W., Daanen, R., Anthony, P., Deimling, T. S. von, Ping, C.-L., Chanton, J. P., & Grosse, G. (2016). Methane emissions proportional to permafrost carbon thawed in arctic lakes since the 1950s. *Nature Geoscience*, 9(9), 679–682. <https://doi.org/10.1038/ngeo2795>
- Aravena, R., Warner, B. G., Charman, D. J., Belyea, L. R., Mathur, S. P., & Dinel, H. (1993). Carbon isotopic composition of deep carbon gases in an ombrogenous peatland, northwestern ontario, canada. *Radiocarbon*, 35(2), 271–276. <https://doi.org/10.1017/s0033822200064948>
- Arlen-Pouliot, Y., & Bhiry, N. (2005). Palaeoecology of a palsa and a filled thermokarst pond in a permafrost peatland, subarctic québec, canada. *The Holocene*, 15(3), 408–419. <https://doi.org/10.1191/0959683605hl818rp>
- Atarashi-Andoh, M., Koarashi, J., Ishizuka, S., & Hirai, K. (2012). Seasonal patterns and control factors of CO₂ effluxes from surface litter, soil organic carbon, and root-derived carbon estimated using radiocarbon signatures. *Agricultural and Forest Meteorology*, 152, 149–158. <https://doi.org/10.1016/j.agrformet.2011.09.015>
- Baied, C. A., & Wheeler, J. C. (1993). Evolution of high andean puna ecosystems: Environment, climate, and culture change over the last 12,000 years in the central andes. *Mountain Research and Development*, 13(2), 145. <https://doi.org/10.2307/3673632>
- Baisden, W. T., Amundson, R., Cook, A. C., & Brenner, D. L. (2002). Turnover and storage of c and n in five density fractions from california annual grassland surface soils. *Global Biogeochemical Cycles*, 16(4), 64–61–64–16. <https://doi.org/10.1029/2001gb001822>
- Baisden, W. T., & Parfitt, R. L. (2007). Bomb 14C enrichment indicates decadal c pool in deep soil? *Biogeochemistry*, 85(1), 59–68. <https://doi.org/10.1007/s10533-007-9101-7>
- Baisden, W. T., Parfitt, R. L., Ross, C., Schipper, L. A., & Canessa, S. (2011). Evaluating 50 years of time-series soil radiocarbon data: Towards routine calculation of robust c residence times. *Biogeochemistry*, 112(1-3), 129–137. <https://doi.org/10.1007/s10533-011-9675-y>
- Basile-Doelsch, I., Amundson, R., Stone, W. E. E., Masiello, C. A., Bottero, J. Y., Colin, F., Masin, F., Borschneck, D., & Meunier, J. D. (2005). Mineralogical control of organic carbon dynamics in a volcanic ash soil on la reunion. *European Journal of Soil Science*, 0(0), 050912034650042. <https://doi.org/10.1111/j.1365-2389.2005.00703.x>
- BAUER, I. E., & VITT, D. H. (2011). Peatland dynamics in a complex landscape: Development of a fen-bog complex in the sporadic discontinuous permafrost zone of northern alberta, canada. *Boreas*, 40(4), 714–726. <https://doi.org/10.1111/j.1502-3885.2011.00210.x>
- Bauters, M., Vercleyen, O., Vanlauwe, B., Six, J., Bonyoma, B., Badjoko, H., Hubau, W., Hoyt, A., Boudin, M., Verbeeck, H., & Boeckx, P. (2019). Long-term recovery of the functional community assembly and carbon pools in an african tropical forest succession. *Biotropica*, 51(3), 319–329. <https://doi.org/10.1111/btp.12647>

- Beaulieu-Audy, V., Garneau, M., Richard, P. J., & Asnong, H. (2009). Holocene palaeoecological reconstruction of three boreal peatlands in the la grande rivière region, québec, canada. *The Holocene*, 19(3), 459–476. <https://doi.org/10.1177/0959683608101395>
- Becker-Heidmann, P., Andresen, O., Kalmar, D., Scharpenseel, H.-W., & Yaalon, D. H. (2002). Carbon dynamics in vertisols as revealed by high-resolution sampling. *Radiocarbon*, 44(1), 63–73. <https://doi.org/10.1017/s0033822200064687>
- Becker-Heidmann, P., & Scharpenseel, H.-W. (1986). Thin layer $\delta^{13}\text{C}$ and d_{14}c monitoring of “Lessive” soil profiles. *Radiocarbon*, 28(2A), 383–390. <https://doi.org/10.1017/s0033822200007499>
- Becker-Heidmann, P., & Scharpenseel, H.-W. (1989). Carbon isotope dynamics in some tropical soils. *Radiocarbon*, 31(03), 672–679. <https://doi.org/10.1017/s0033822200012273>
- Behling, H. (1995). Investigations into the late pleistocene and holocene history of vegetation and climate in santa catarina (s brazil). *Vegetation History and Archaeobotany*, 4(3). <https://doi.org/10.1007/bf00203932>
- Behling, H., & Pillar, V. D. (2006). Late quaternary vegetation, biodiversity and fire dynamics on the southern brazilian highland and their implication for conservation and management of modern araucaria forest and grassland ecosystems. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 362(1478), 243–251. <https://doi.org/10.1098/rstb.2006.1984>
- Beilman, D. W., Massa, C., Nichols, J. E., Timm, O. E., Kallstrom, R., & Dunbar-Co, S. (2019). Dynamic holocene vegetation and north pacific hydroclimate recorded in a mountain peatland, moloka‘i, hawai‘i. *Frontiers in Earth Science*, 7. <https://doi.org/10.3389/feart.2019.00188>
- Bellen, S. van, Garneau, M., & Booth, R. K. (2011). Holocene carbon accumulation rates from three ombrotrophic peatlands in boreal quebec, canada: Impact of climate-driven ecohydrological change. *The Holocene*, 21(8), 1217–1231. <https://doi.org/10.1177/0959683611405243>
- Bellisario, L. M., Bubier, J. L., Moore, T. R., & Chanton, J. P. (1999). Controls on CH_4 emissions from a northern peatland. *Global Biogeochemical Cycles*, 13(1), 81–91. <https://doi.org/10.1029/1998gb900021>
- Benfield, A. J., Yu, Z., & Benavides, J. C. (2021). Environmental controls over holocene carbon accumulation in distichia muscoides-dominated peatlands in the eastern andes of colombia. *Quaternary Science Reviews*, 251, 106687. <https://doi.org/10.1016/j.quascirev.2020.106687>
- Benner, R., Benitez-Nelson, B., Kaiser, K., & Amon, R. M. W. (2004). Export of young terrigenous dissolved organic carbon from rivers to the arctic ocean. *Geophysical Research Letters*, 31(5), n/a–n/a. <https://doi.org/10.1029/2003gl019251>
- Berg, B., & Gerstberger, P. (2004). Element fluxes with litterfall in mature stands of norway spruce and european beech in bavaria, south germany. In *Ecological studies* (pp. 271–278). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-662-06073-5_16
- Berhe, A. A., Harden, J. W., Torn, M. S., Kleber, M., Burton, S. D., & Harte, J. (2012). Persistence of soil organic matter in eroding versus depositional landform positions. *Journal of Geophysical Research: Biogeosciences*, 117(G2), n/a–n/a. <https://doi.org/10.1029/2011jg001790>
- Bhiry, N., Payette, S., & C. Robert. (2007). Peatland development at the arctic tree line (québec, canada) influenced by flooding and permafrost. *Quaternary Research*, 67(3), 426–437. <https://doi.org/10.1016/j.yqres.2006.11.009>
- Biedenbender, S. H., McClaran, M. P., Quade, J., & Weltz, M. A. (2004). Landscape patterns of vegetation change indicated by soil carbon isotope composition. *Geoderma*, 119(1-2), 69–83. [https://doi.org/10.1016/s0016-7061\(03\)00234-9](https://doi.org/10.1016/s0016-7061(03)00234-9)
- Billings, W. (1987). Carbon balance of alaskan tundra and taiga ecosystems: Past, present and future. *Quaternary Science Reviews*, 6(2), 165–177. [https://doi.org/10.1016/0277-3791\(87\)90032-1](https://doi.org/10.1016/0277-3791(87)90032-1)
- Binkley, D., & Resh, S. C. (1999). Rapid changes in soils following eucalyptus afforestation in hawaii. *Soil Science Society of America Journal*, 63(1), 222–225. <https://doi.org/10.2136/sssaj1999.03615995006300010032x>

- Bird, M., Santrůcková, H., Lloyd, J., & Lawson, E. (2002). The isotopic composition of soil organic carbon on a north-south transect in western Canada. *European Journal of Soil Science*, 53(3), 393–403. <https://doi.org/10.1046/j.1365-2389.2002.00444.x>
- Blyakharchuk, T. A. (2003). Four new pollen sections tracing the Holocene vegetational development of the southern part of the west Siberian lowland. *The Holocene*, 13(5), 715–731. <https://doi.org/10.1191/0959683603hl658rp>
- Blyakharchuk, T. A., & Sulerzhitsky, L. D. (1999). Holocene vegetational and climatic changes in the forest zone of western Siberia according to pollen records from the extrazonal paludal bog boguistoye. *The Holocene*, 9(5), 621–628. <https://doi.org/10.1191/095968399676614561>
- Bol, R., Bolger, T., Cully, R., & Little, D. (2003). Recalcitrant soil organic materials mineralize more efficiently at higher temperatures. *Journal of Plant Nutrition and Soil Science*, 166(3), 300–307. <https://doi.org/10.1002/jpln.200390047>
- BOL, R., HUANG, Y., MERIDITH, J., EGLINTON, G., HARKNESS, D., & INESON, P. (1996). The 14C age and residence time of organic matter and its lipid constituents in a stagnohumic gley soil. *European Journal of Soil Science*, 47(2), 215–222. <https://doi.org/10.1111/j.1365-2389.1996.tb01392.x>
- Bouchard, F., Laurion, I., Prėskienis, V., Fortier, D., Xu, X., & Whittier, M. J. (2015). Modern to millennium-old greenhouse gases emitted from ponds and lakes of the eastern Canadian Arctic (Bylot Island, Nunavut). *Biogeosciences*, 12(23), 7279–7298. <https://doi.org/10.5194/bg-12-7279-2015>
- Bukombe, B., Fiener, P., Hoyt, A. M., & Doetterl, S. (2021). *Controls on heterotrophic soil respiration and carbon cycling in geochemically distinct African tropical forest soils*. <https://doi.org/10.5194/soil-2020-96>
- Butman, D., Raymond, P., Oh, N.-H., & Mull, K. (2007). Quantity, 14C age and lability of desorbed soil organic carbon in fresh water and seawater. *Organic Geochemistry*, 38(9), 1547–1557. <https://doi.org/10.1016/j.orggeochem.2007.05.011>
- Butnor, J. R., Samuelson, L. J., Johnsen, K. H., Anderson, P. H., Benecke, C. A. G., Boot, C. M., Cotrufo, M. F., Heckman, K. A., Jackson, J. A., Stokes, T. A., & Zarnoch, S. J. (2017). Vertical distribution and persistence of soil organic carbon in fire-adapted longleaf pine forests. *Forest Ecology and Management*, 390, 15–26. <https://doi.org/10.1016/j.foreco.2017.01.014>
- Camargo, P. B. D., Trumbore, S. E., Martinelli, L. A., Davidson, E. A., Nepstad, D. C., & Victoria, R. L. (1999). Soil carbon dynamics in regrowing forest of eastern Amazonia. *Global Change Biology*, 5(6), 693–702. <https://doi.org/10.1046/j.1365-2486.1999.00259.x>
- Caner, L., Toutain, F., Bourgeon, G., & Herbillon, A.-J. (2003). Occurrence of sombric-like subsurface horizons in some Andic soils of the Nilgiri Hills (Southern India) and their palaeoecological significance. *Geoderma*, 117(3–4), 251–265. [https://doi.org/10.1016/S0016-7061\(03\)00127-7](https://doi.org/10.1016/S0016-7061(03)00127-7)
- Carbone, M. S., Richardson, A. D., Chen, M., Davidson, E. A., Hughes, H., Savage, K. E., & Hollinger, D. Y. (2016). Constrained partitioning of autotrophic and heterotrophic respiration reduces model uncertainties of forest ecosystem carbon fluxes but not stocks. *Journal of Geophysical Research: Biogeosciences*, 121(9), 2476–2492. <https://doi.org/10.1002/2016jg003386>
- Carbone, M. S., Still, C. J., Ambrose, A. R., Dawson, T. E., Williams, A. P., Boot, C. M., Schaeffer, S. M., & Schimel, J. P. (2011). Seasonal and episodic moisture controls on plant and microbial contributions to soil respiration. *Oecologia*, 167(1), 265–278. <https://doi.org/10.1007/s00442-011-1975-3>
- Carbone, M. S., Winston, G. C., & Trumbore, S. E. (2008). Soil respiration in perennial grass and shrub ecosystems: Linking environmental controls with plant and microbial sources on seasonal and diel timescales. *Journal of Geophysical Research: Biogeosciences*, 113(G2), n/a–n/a. <https://doi.org/10.1029/2007jg000611>
- Castanha, C., Trumbore, S., & Amundson, R. (2012). Mineral and organic matter characterization of density fractions of basalt- and granite-derived soils in montane California. In *An introduction to the study of mineralogy*. InTech. <https://doi.org/10.5772/36735>

- Chabbi, A., Kögel-Knabner, I., & Rumpel, C. (2009). Stabilised carbon in subsoil horizons is located in spatially distinct parts of the soil profile. *Soil Biology and Biochemistry*, 41(2), 256–261. <https://doi.org/10.1016/j.soilbio.2008.10.033>
- Chasar, L. S., Chanton, J. P., Glaser, P. H., Siegel, D. I., & Rivers, J. S. (2000). Radiocarbon and stable carbon isotopic evidence for transport and transformation of dissolved organic carbon, dissolved inorganic carbon, and CH₄ in a northern minnesota peatland. *Global Biogeochemical Cycles*, 14(4), 1095–1108. <https://doi.org/10.1029/1999gb001221>
- Chen, L., Fang, K., Wei, B., Qin, S., Feng, X., Hu, T., Ji, C., & Yang, Y. (2021). Soil carbon persistence governed by plant input and mineral protection at regional and global scales. *Ecology Letters*, 24(5), 1018–1028. <https://doi.org/10.1111/ele.13723>
- Chen, Q., Sun, Y., Shen, C., Peng, S., Yi, W., Li, Z., & Jiang, M. (2002). Organic matter turnover rates and CO₂ flux from organic matter decomposition of mountain soil profiles in the subtropical area, south china. *CATENA*, 49(3), 217–229. [https://doi.org/10.1016/s0341-8162\(02\)00044-9](https://doi.org/10.1016/s0341-8162(02)00044-9)
- Cherkinsky, A. E. (1996). ¹⁴C dating and soil organic matter dynamics in arctic and subarctic ecosystems. *Radiocarbon*, 38(2), 241–245. <https://doi.org/10.1017/s0033822200017616>
- Chiti, T., Certini, G., Forte, C., Papale, D., & Valentini, R. (2015). Radiocarbon-based assessment of heterotrophic soil respiration in two mediterranean forests. *Ecosystems*, 19(1), 62–72. <https://doi.org/10.1007/s10021-015-9915-4>
- Chiti, T., Certini, G., Grieco, E., & Valentini, R. (2010). The role of soil in storing carbon in tropical rainforests: The case of ankasa park, ghana. *Plant and Soil*, 331(1-2), 453–461. <https://doi.org/10.1007/s11104-009-0265-x>
- Chiti, T., Di'az-Pinés, E., Butterbach-Bahl, K., Marzaioli, F., & Valentini, R. (2017). Soil organic carbon changes following degradation and conversion to cypress and tea plantations in a tropical mountain forest in kenya. *Plant and Soil*, 422(1-2), 527–539. <https://doi.org/10.1007/s11104-017-3489-1>
- Chiti, T., Neubert, R., Janssens, I., Certini, G., Yuste, J. C., & Sirignano, C. (2009). Radiocarbon dating reveals different past managements of adjacent forest soils in the campine region, belgium. *Geoderma*, 149(1-2), 137–142. <https://doi.org/10.1016/j.geoderma.2008.11.030>
- Chiti, T., Rey, A., Jeffery, K., Lauteri, M., Mihindou, V., Malhi, Y., Marzaioli, F., White, L. J. T., & Valentini, R. (2018). Contribution and stability of forest-derived soil organic carbon during woody encroachment in a tropical savanna. A case study in gabon. *Biology and Fertility of Soils*, 54(8), 897–907. <https://doi.org/10.1007/s00374-018-1313-6>
- Chorover, J., Amistadi, M. K., & Chadwick, O. A. (2004). Surface charge evolution of mineral-organic complexes during pedogenesis in hawaiian basalt. *Geochimica et Cosmochimica Acta*, 68(23), 4859–4876. <https://doi.org/10.1016/j.gca.2004.06.005>
- Cobb, A. R., Hoyt, A. M., Gandois, L., Eri, J., Dommain, R., Salim, K. A., Kai, F. M., Su'ut, N. S. H., & Harvey, C. F. (2017). How temporal patterns in rainfall determine the geomorphology and carbon fluxes of tropical peatlands. *Proceedings of the National Academy of Sciences*, 201701090. <https://doi.org/10.1073/pnas.1701090114>
- Cole, L. E. S., Bhagwat, S. A., & Willis, K. J. (2015). Long-term disturbance dynamics and resilience of tropical peat swamp forests. *Journal of Ecology*, 103(1), 16–30. <https://doi.org/10.1111/1365-2745.12329>
- Conen, F., Zimmermann, M., Leifeld, J., Seth, B., & Alewell, C. (2008). Relative stability of soil carbon revealed by shifts in $\delta^{15}\text{N}$ and c:N ratio. *Biogeosciences*, 5(1), 123–128. <https://doi.org/10.5194/bg-5-123-2008>
- Cook, S., Whelan, M. J., Evans, C. D., Gauci, V., Peacock, M., Garnett, M. H., Kho, L. K., Teh, Y. A., & Page, S. E. (2018). Fluvial organic carbon fluxes from oil palm plantations on tropical peatland. *Biogeosciences*, 15(24), 7435–7450. <https://doi.org/10.5194/bg-15-7435-2018>