

LISTE DE PUBLICATIONS AMORAD au 02/03/2020

Validée par O Radakovitch, RST AMORAD

Pour publication sur site web Amorad/IRSN

Publications 2014:

- Evrard O, Pointurier F, Onda Y, Chartin C, Hubert A, Lepage H, Pottin AC, Lefèvre I, Bonté P, Laceby JP, Ayrault S. 2014. Novel Insights into Fukushima Nuclear Accident from Isotopic Evidence of Plutonium Spread along Coastal Rivers. *Environ. Sci. Technol.*, 48 (16), pp 9334-9340. DOI: 10.1021/es501890n
- Evrard O, Chartin C, Onda Y, Lepage H, Cerdan O, Lefèvre I., Ayrault S. 2014. Renewed soil erosion and remobilisation of radioactive sediment in Fukushima coastal rivers after the 2013 typhoons. *Nature, Scientific Reports 4*, 4574, doi:10.1038/srep04574
- Lepage H, Evrard O., Onda Y, Lefèvre I, Laceby J.P., Ayrault S. 2014. Depth distribution of radiocesium in Fukushima paddy fields and implications for ongoing decontamination works. *Soil discussions*, 1, 401-428.
- Lepage H., Evrard O., Onda Y., Chartin C., Lefèvre I., Ayrault S., Bonte P. 2014. Tracking the origin and dispersion of contaminated sediments transported by rivers draining the Fukushima radioactive contaminant plume. *In: Sediment Dynamics from the Summit to the Sea* (Ed. Jun Xu et al.), IAHS Publ. 367, 2014. ISBN: 978-1-907161-45-2.

Publications 2015 :

- Calmon P, Gonze M-A, Murlon C. Modeling the early-phase redistribution of radiocesium fallouts in an evergreen coniferous forest after Chernobyl and Fukushima accidents. *Science of The Total Environment*. 2015; 529:30-9.
- Evrard O, Laceby JP, Lepage H, Onda Y, Cerdan O, Ayrault S. Radiocesium transfer from hillslopes to the Pacific Ocean after the Fukushima Nuclear Power Plant accident: A review. *Journal of Environmental Radioactivity*. 2015; 148:92-110.
- Lepage H, Evrard O, Onda Y, Lefèvre I, Laceby JP, Ayrault S. 2015. Depth distribution of cesium-137 in paddy fields across the Fukushima pollution plume in 2013. *Journal of Environmental Radioactivity*. 147:157-164.
- Loffredo N, Onda Y, Hurtevent P, Coppin F. 2015. Equation to predict the 137 Cs leaching dynamic from evergreen canopies after a radio-cesium deposit. *Journal of Environmental Radioactivity*. 147 :100-7.

Publications 2016 :

- Belharet M., Estournel. C., Charmasson S. 2016. Ecosystem model-based approach for modelling the dynamics of 137Cs transfer to marine plankton populations : application to the Western North Pacific Ocean after the Fukushima nuclear power plant accident. *Biogeosciences* 13, 499-516, doi:10.5194/bg-13-499-2016, 2016.
- Coppin F., Hurtevent P., Loffredo N., Simonucci C., Julien A., Gonze MA., Nanba K., Onda Y., Thiry Y. 2016. Radiocesium partitioning in Japanese cedar forests following the "early" phase of Fukushima fallout redistribution. *Nature Scientific reports* 6, 37618. doi:10.1038/srep37618
- Evrard, O., Laceby, J.P., Onda, Y., Wakiyama, Y., Jaegler, H., Lefèvre, I. 2016. Quantifying the dilution of the initial radioactive contamination in Fukushima coastal river sediment (2011-2015). *Nature Scientific Reports* 6:34828 | DOI: 10.1038/srep34828.
- Eyrolle-Boyer F, Boyer P, Garcia-Sanchez L, Métivier J-M, Onda Y, De Vismes A, et al. 2016. Behaviour of radiocaesium in coastal rivers of the Fukushima Prefecture (Japan) during conditions of low flow and low turbidity - Insight on the possible role of small particles and detrital organic compounds. *Journal of Environmental radioactivity*. 2016;151:328-340.
- Gil-Díaz T., Schäfer J., Pougnet F., Abdou M., Dutruch L., Eyrolle-Boyer F., Coynel A., Blanc G. 2016. Distribution and geochemical behaviour of antimony in the Gironde Estuary: A first qualitative approach to regional nuclear accident scenarios. *Marine Chemistry* 185, 65-73.

- Lacey JP., Chartin C, Evrard O, Onda Y, Garcia-Sanchez L, Cerdan O. 2016. Rainfall erosivity in catchments contaminated with fallout from the Fukushima Daiichi nuclear power plant accident. *Hydrol Earth System Sci.* 20:2467-2482.
- Lacey JP, Huon S, Onda Y, Vaury V, Evrard O. 2016. Do forests represent a long-term source of contaminated particulate matter in the Fukushima Prefecture? *Journal of environmental management.* 183:742-753.
- Lepage H, Lacey J, Bonté P, Joron JL, Onda Y, Lefèvre I, Ayrault S, Evrard O. 2016. Investigating the source of radiocesium contaminated sediment in two Fukushima coastal catchments with sediment tracing techniques. *Anthropocene.* 13:57-68.
- Loffredo N, Sun X, Onda Y. 2016. DHPT 1.0: a new Algorithm to calculate canopy closure from photographs. *Computers and Electronics in Agriculture.* 125:39-47.
- Many G., Bourrin F. , Durrieu de Madron X., Pairaud I. , Gangloff A., Doxaran D., Ody A., Verney R. Menniti C., Le Berre D., Jacquet M.. 2016. Particle assemblage characterization in the Rhone River ROFI. *Journal of Marine System,* 157, 39-51.
- Thiry, Y., Garcia-Sanchez, L., Hurtevent, P. 2016. Experimental quantification of radiocaesium recycling in a forest tree after aerial contamination: field loss dynamics, translocation and final partitioning. *Journal of Environmental Radioactivity.* 161:42-50.

Publications 2017 :

- Buesseler K, Dai M, Aoyama M, Benitez-Nelson C, Charmasson S, Higley K, Maderich V, Masqué P, Morris PJ, Oughton D, Smith JN. Fukushima Daiichi-Derived Radionuclides in the Ocean: Transport, Fate, and Impacts. 2017. *Ann Rev Mar Sci.* 9:173-203. doi: 10.1146/annurev-marine-010816-060733.
- Fiévet B, Bailly-du-Bois P, Laguionie P, Morillon M, Arnaud M, Cunin P. 2017. A dual pathways transfer model to account for changes in the radioactive caesium level in demersal and pelagic fish after the Fukushima Dai-ichi nuclear power plant accident. *PLoS ONE* 12(3): e0172442. <https://doi.org/10.1371/journal.pone.0172442>
- Gangloff A., Verney R., Doxaran D., Ody D., Estournel C. 2017. Investigating Rhône River plume (Gulf of Lions, France) dynamics using metrics analysis from the MERIS 300m Ocean Color archive (2002-2012), *Continental Shelf Research,* 144: 98-111, <https://doi.org/10.1016/j.csr.2017.06.024>.
- Moriarty, J. M., Harris, C. K., Rabouille, C., Fennel, K., Friedrichs, M.A.M, and Xu, K. 2017. The Roles of Resuspension, Diffusion and Biogeochemical Processes on Oxygen Dynamics Offshore of the Rhone River, France: A Numerical Modeling Study. *Biogeosciences.* 14, 1919-1946. doi:10.5194/bg-14-1919-2017
- Moriarty, J. M., Harris, C. K., Fennel, K., Xu, K., Rabouille, C., and riedrichs, M.A.M. 2017. A Model Archive for a Coupled Hydrodynamic-Sediment Transport-Biogeochemistry Model for the Rhône River Sub-aqueous Delta, France. *Virginia Institute of Marine Science, College of William and Mary.* <https://doi.org/10.21220/V53P4Q>
- Chartin C., Evrard O., Lacey J. P., Onda Y., Otlé C., Lefèvre I., Cerdan O. 2017. The impact of typhoons on sediment connectivity: Lessons learnt from contaminated coastal catchments of the Fukushima Prefecture (Japan). *Earth Surf. Process. Landforms* 42 :306-317, doi: [10.1002/esp.4056](https://doi.org/10.1002/esp.4056).
- Delmas M., Garcia-Sanchez L., Nicoulaud-Gouin V., Onda Y. 2017. Improving transfer functions to describe radiocesium wash-off fluxes for the Niida River by a Bayesian approach. *Journal of Environmental Radioactivity,* 167:100-109 <https://doi.org/10.1016/j.jenvrad.2016.11.002>.
- Gonze M.-A., Calmon P. 2017. Meta-analysis of radiocesium contamination data in Japanese forest trees over the period 2011-2013. *Science of The Total Environment,* 601-602: 301-316, <https://doi.org/10.1016/j.scitotenv.2017.05.175>.
- Naulier M, Eyrolle-Boyer F, Boyer P, Métivier JM, Onda Y. 2017. Particulate organic matter in rivers of Fukushima: An unexpected carrier phase for radiocesiums, *Science of The Total Environment,* 579: 1560-1571, <https://doi.org/10.1016/j.scitotenv.2016.11.165>.

Publications 2018 :

- Gil-Diaz T., Schäfer J., Coynel A., Bossy C., Dutruch L., Blanc G. 2018. Antimony in the Lot-Garonne river system: a 14-year record of solid-liquid partitioning and fluxes. *Environmental Chemistry*. <https://doi.org/10.1071/EN17188>.
- Gorny J., Gourgiotis A., Coppin F., Février L., Zhang H., Simonucci C. 2018. Better understanding and applications of AMP-DGT techniques for measuring Cs in waters. *Environmental Science and Pollution Research* <https://doi.org/10.1007/s11356-018-3719-y>
- Huon S., Hayashi S., Laceby JP., Tsuji H., Onda Y., Evrard O. 2018. Source dynamics of radiocesium-contaminated particulate matter deposited in an agricultural water reservoir after the Fukushima nuclear accident. *Science of The Total Environment*. 612:1079-1090.
- Jaegler H., Pointurier F., Onda Y, Hubert A., Laceby J.P., Cirella M, Evrard O. 2018. Plutonium isotopic signatures in soils and their variation (2011-2014) in sediment transiting a coastal river in the Fukushima Prefecture, Japan. *Environmental Pollution*. 240 : 167-176
- Kurihara M, Onda Y, Kato H, Loffredo N., Yasutaka T., Coppin F., 2018. Radiocesium migration in the litter layer of different forest types in Fukushima, Japan. *Journal of Environmental Radioactivity*. 187:81-89
- Lessin G, Artioli Y, Almroth-Rosell E, Blackford JC, Dale AW, Glud RN, Middelburg JJ, Pastres R, Queirós AM, Rabouille C, Regnier P, Soetaert K, Solidoro C, Stephens N, Yakushev E. 2018. Modelling Marine Sediment Biogeochemistry: Current Knowledge Gaps, Challenges, and Some Methodological Advice for Advancement. *Frontiers Marine Sciences*. 5:19. doi: 10.3389/fmars.2018.00019
- Many G., Bourrin F., Durrieu de Madron X. , Ody A., Doxaran D., Cauchy P., 2018. Glider and satellite monitoring of the variability of the suspended particle distribution and size in the Rhône ROFI. *Progress in Oceanography*. 163, 123-135
- Pastor L., Rabouille C., Metzger E., De Chanvalon T., Viollier E., Deflandre B., 2018. Transient early diagenetic processes in Rhône prodelta sediments revealed in contrasting flood events. *Continental Shelf Research*. 166, 65-76.
- Pozzato, L., Rassmann, J., Lansard, B., Dumoulin, J.-P., van Brugel, P. and Rabouille, C. 2018. Origin of remineralized organic matter in sediments from the Rhone River prodelta (NW Mediterranean) traced by $\Delta^{14}\text{C}$ and $\delta^{13}\text{C}$ signatures of pore water DIC. *Progress in Oceanography*. 163, 112-122
- Roulier M., Bueno M., Thiry Y., Coppin F., Redon P.O., Le Hecho I., Pannier F. 2018. Iodine distribution in a beech (*Fagus sylvatica*) temperate forest. *Science of The Total Environment*. 645: 431-440.
- Teramage MT., Carasco L, Orjollet D, Coppin F, 2018. The impact of radiocesium input forms on its extractability in Fukushima forest soils. *Journal of Hazardous Materials*. 349:205-214
- Thiry Y., Albrecht A., Tanaka T. 2018. Development and assessment of a simple ecological model (TRIPS) for forests contaminated by radiocesium fallout. *Journal of Environmental Radioactivity*. 190-191: 149-159.
- Wu J., Rabouille C., Charmasson S., Reyss J.-L., Cagnat X. 2018. Constraining the origin of recently deposited particles using natural radionuclides ^7Be and ^{234}Th in deltaic sediments. *Continental Shelf Research* <https://doi.org/10.1016/j.csr.2018.06.010>

Publications 2019:

- Bacchi V. , Pablo Tassi P. 2019. Three-dimensional Modelling of radionuclides Dispersion in a Marine Environment with Application to the Fukushima Dai-ichi Case. *Environmental Modeling & Assessment* 24:457-477. <https://doi.org/10.1007/s10666-018-9614-6>
- Belharet M, Charmasson S, Tsumune D, Arnaud M, Estournel C. 2019. Numerical modelling of ^{137}Cs content in the pelagic species of the Japanese Pacific coast following the Fukushima Dai-ichi Nuclear Power Plant accident using a size structured food-web model. *PLoS ONE* 14(3):e0212616. <https://doi.org/10.1371/journal.pone.0212616>.
- Delmas M., Garcia-Sanchez L., Onda Y. 2019. Factors controlling the variability of ^{137}Cs concentrations in 5 coastal rivers around Fukushima Dai-ichi power plant. *Journal of Environmental Radioactivity*. 204: 1-11.
- Evrard O., Patrick Laceby J., Ficetola G.F., Giley L., Huon S., Lefevre I., Onda Y., Poulenard J. 2019. Environmental DNA provides information on sediment sources: A study in catchments affected by Fukushima radioactive fallout. *Science of The Total Environment*. 665, 873-881.

- Evrard O., Lacey J.P., Nakao A. 2019. Effectiveness of landscape decontamination following the Fukushima nuclear accident: a review. *Soil*. 5, 333-350. <https://doi.org/10.5194/soil-5-333-2019>
- Evrard O., Durand R., Foucher A., Tiecher T., Sellier V., Onda Y., Lefevre I., Cerdan O., Lacey J.P. 2019. Using spectrocolourimetry to trace sediment source dynamics in coastal catchments draining the main Fukushima radioactive pollution plume (2011-2017). *Journal of Soil and Sediments*. 19, 3290-3301. <https://doi.org/10.1007/s11368-019-02302-w>
- Evrard, O. 2019. Recommendation for the Fukushima project from foreign scientists. In: Nakajima, T., Ohara, T., Uematsu, M., Onda, Y. (Ed.) 2019, *Environmental Contamination from the Fukushima Nuclear Disaster*, Cambridge University Press, London.
- Evrard, O., Patrick Lacey, J. 2019. Sediment and radionuclide transfer from the land to the ocean: International research perspectives. In: Nakajima, T., Ohara, T., Uematsu, M., Onda, Y. (Ed.) 2019, *Environmental Contamination from the Fukushima Nuclear Disaster*, Cambridge University Press, London.
- Gil-Diaz T. 2019. Tellurium radionuclides produced by major accidental events in nuclear power plants. *Environmental Chemistry*. <https://doi.org/10.1071/EN19054>.
- Gil-Diaz T., Schafer J., Dutruch L., Bossy C., Pougnet F., Abdou M., Lerat-Hardy A., Pereto C., Derrienic H., Briant N., Sireau T., Knoery J., Blanc G. 2019a. Tellurium behaviour in a major European fluvial-estuarine system (Gironde, France): Fluxes, solid/liquid partitioning and bioaccumulation in wild oysters. *Environmental Chemistry*. 16(4) 229-242 <https://doi.org/10.1071/EN18226>
- Gil-Diaz T., Schafer J., Filella M., Dutruch L., Bossy C., 2019b. Fractionation of inherited and spiked antimony (Sb) in fluvial/estuarine bulk sediments: Unexpected anomalies in parallel selective extraction protocols. *Applied Geochemistry*. 108, 104386
- Gorny, J., Gourgiotis, A., Coppin, F., Fevrier L., Zhang H., Simonucci C. 2019. Better understanding and applications of ammonium 12-molybdophosphate-based diffusive gradient in thin film techniques for measuring Cs in waters. *Environ Sci Pollut Res*. 26: 1994. <https://doi.org/10.1007/s11356-018-3719-y>
- Jaegler H., Pointurier F., Onda Y., Angulo J.F., Griffiths N.M., Moureau A., Faure A., Marie O., Hubert A., Evrard O., 2019. Method for detecting and characterising actinide-bearing micro-particles in soils and sediment of the Fukushima prefecture, Japan. *Journal of Radioanalytical and Nuclear Chemistry*. 321, 57-69. <https://doi.org/10.1007/s10967-019-06575-w>
- Jaegler H., Pointurier F., Diez-Fernandez S., Gourgiotis A., Isnard H., Hayashi S., Tsuji H., Onda Y., Hubert A., Patrick Lacey J., Evrard O. 2019. Reconstruction of uranium and plutonium isotopic signatures in sediment accumulated in the Mano Dam reservoir, Japan, before and after the Fukushima nuclear accident. *Chemosphere*. 225 : 849-858. <https://doi.org/10.1016/j.chemosphere.2019.03.064>
- Minghelli A., Lei M., Charmasson S., Rey V., Chami M. 2019 Monitoring suspended particulate matter using GOCI satellite data after the Tohoku (Japan) Tsunami in 2011. *IEE Journ. Selected Topics in Applied Earth Observations and Remote Sensing*. 12, 2. <https://doi.org/10.1109/JSTARS.2019.2894063>
- Paterne M., Evrard O., Hatté C., Patrick Lacey J., Nouet J., Onda Y. 2019. Radioacarbon and radiocesium in litter fall at Kawamata, 45 km NW from the Fukushima Dai-ichi nuclear power plant (Japan). *Journal of Radioanalytical and Nuclear Chemistry*. 319, 1093-1101. <https://doi.org/10.1007/s10967-018-6360-9>
- Roulier M., Coppin F., Bueno M., Nicolas M., Thiry Y., Della Vedova C., Février L., Pannier F., Le Hécho I. 2019. Iodine budget in forest soils: influence of environmental conditions and soil physicochemical properties. *Chemosphere* 224: 20-28. <https://doi.org/10.1016/j.chemosphere.2019.02.060>
- Teramage M.T., Carasco L., Coppin F. 2019. The impact of drying and wetting cycle on ¹³⁷Cs ageing in forest soil contaminated by different input forms. *Journal of Environmental Radioactivity*. 203 : 93-97. <https://doi.org/10.1016/j.jenvrad.2019.03.007>