

# Jean Pierre Ometto

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## Education and Academic Positions

- Senior Researcher and Director of the Earth System Science Centre of the National Institute for Space Research (CCST/INPE)
- Professor at the PostGrad Program in Earth System Science. CCST/INPE
- Associate Professor at the PostGrad Program in Ecology at the Federal University of Juiz de Fora, MG and at Universidade Estadual Paulista (UNESP)
- Post-doctoral Research Associate. University of Utah, Salt Lake City, Utah, USA.
- Ph.D. Center for Nuclear Energy Studies in Agriculture (CENA/USP), Piracicaba, SP, 2001
- International Geosphere-Biosphere Programme Officer in Brazil (IGBP)

## Other Science related activities

Nominated IPCC-AR5 contributor for WG-II and Task Force on GHG emissions inventories, in the IPBES on Regional and Sub-Regional Scoping Assessment and for the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC) in Latin America; Brazilian Representative on the Inter-American Institute for Global Change Research Executive Council; Associated Member of The Global Carbon project and Member of the Sao Paulo State Research Foundation (FAPESP) Climate Change Research Program board. Vice Coordinator and Member of the Bureau of REDE CLIMA; Post-Coordinator of the Post-Grad Programme at Earth System Science Centre CCST/ INPE (2010-2013) - Environmental Sciences Coordination (CACIAmb CAPES); Brazilian Representative with the Executive Council and the Conference of the Parties for the InterAmerican institute for Global Change Research (IAI); Coordinator of the Cooperation Program for the International Geosphere-Biosphere Program Regional Office (IGBP-BRO) and The Global Land Project International project Office (GLP-IPO);

## Areas of expertise/interest

**General:** Ecosystem functioning.

**Specific areas:** biogeochemical cycling of carbon and nutrients in aquatic and terrestrial ecosystems; forest dynamic and biomass; biosphere-atmosphere interactions and gas fluxes; ecological impacts of climate change; stable isotopes.

## ***Selected Scientific Publications, 2015-2017 (Total: 100; Book: 03; Book Chapters: 18)***

Englund O, Sparovek G, Göran Berndes G, Freitas F, Ometto JP, Oliveira PVC, Costa C, Lapola D "A new high-resolution nation-wide aboveground carbon map for Brazil". *Geo: Geography and Environment*, 2017.

Bustamante, Mercedes M.C. ; Valeriano, Dalton De Morisson ; De Almeida, Claudio Aparecido ; Cantinho, Roberta ; Maurano, Luiz Eduardo Pinheiro ; Nobre, Carlos A. ; Oliveira, Pedro V.C. ; Ometto, Jean P.B. ; Roitman, Iris ; Rojas, Márcio ; Santos, Mauro Meirelles De O. ; Shimbo, Julia Zanin . Are Brazil deforesters avoiding detection? Reply to Richards et al. 2016. *Conservation Letters*, 2017.

De Mendonça HV, Ometto JPHB, Otenio MH, Dos Reis AJD, Marques IPR. Bioenergy recovery from cattle wastewater in an UASB-AF hybrid reactor. *WATER SCIENCE AND TECHNOLOGY*, v. 75, p. wst2017325, 2017.

- Nascimento VF; Yesiller N, Clarke KC, Ometto JPHB, Andrade PR, Sobral AC. Modeling the environmental susceptibility of landfill sites in California. *GIScience & Remote Sensing*, v. 001, p. 1-21, 2017.
- Pacheco FS, Miranda M, Pezzi LP, Assireu A, Marinho MM, Malafaia M, Reis A, Sales M, CorreiamG, Domingos P, Iwama A, Rudorff C, Oliva P, Ometto JP. Water quality longitudinal profile of the Paraíba do Sul River, Brazil during an extreme drought event. *LIMNOLOGY AND OCEANOGRAPHY*, v. 00, p. 01, 2017.
- Baron JS, Specht A, Garnier E, Bishop P, Campbell CA, Davis FW, Fady B, Field D, Gross LJ, Guru SM, Halpern BS, Hampton SE, Leavitt PR, Meagher TR, Ometto J, Parker JN, Price R, Rawson CH, Rodrigo A, Sheble LA, Winter M. Synthesis Centers as Critical Research Infrastructure. *BIOSCIENCE*, v. xx, p. 1-10, 2017.
- Nolasco C; Soler L, Freitas M, Lahsen M, Ometto, JP. Scenarios of Vegetable Demand vs. Production in Brazil: The Links between Nutritional Security and Small Farming. *LAND*, v. 6, p. 49, 2017.
- Mendes KR, Granja, JAA, Ometto JP, Antonino ACD, Menezes RSC, Pereira EC, Pompelli MF. Croton blanchetianus modulates its morphophysiological responses to tolerate drought in a tropical dry forest. *FUNCTIONAL PLANT BIOLOGY*, v. 45, p. 000, 2017.
- De Mendonça, HV; Ometto, JPHB; Otenio, MH (2017) . Production of Energy and Biofertilizer from Cattle Wastewater in Farms with Intensive Cattle Breeding. *Water, Air and Soil Pollution (Dordrecht. Online)*, v. 228, p. 72, 2017.
- Boillat, S; Scarpa, FM ; Robson, JP ; Gasparri, I; Aide, TM; Aguiar, APD; Anderson, LO ; Batistella, M ; Fonseca, MG ; Futemma, C; Grau, HR; Mathez-Stiefel, S-L; Metzger, JP; Ometto, JPHB; Pedlowski, MA; Perz, SG ; Robiglio, V; Soler, L; Vieira, I; Brondizio, ES (2017). Land system science in Latin America: challenges and perspectives. *Current Opinion in Environmental Sustainability* (2017), v. 26-27, p. 37-46
- Ometto JP.; Sousa-Neto, ER. ; Tejada, G. Land Use, Land Cover and Land Use Change in the Brazilian Amazon (1960-2013). *Ecological Studies*. 1ed.: Springer Berlin Heidelberg, 2016, p. 369-383.
- Rezende, L. F. C. ; Arenque, B. C. ; Aidar, S. T. ; Moura, M. S. B. ; Von Randow, C. ; Tourigny, E. ; Menezes, R. S. C. ; Ometto, J. P. H. B. Is the maximum velocity of carboxylation ( $V_{cmax}$ ) well adjusted for deciduous shrubs in DGVMs? A case study for the Caatinga biome in Brazil. *Modeling Earth Systems and Environment*, v. 2, p. 41, 2016.
- Ribeiro K, Sousa-Neto ER, Carvalho JA, Sousa Lima JR, Menezes RS, Duarte-Neto PJ, Da Silva Guerra G Ometto JPHB (2016). Land cover changes and greenhouse gas emissions in two different soil covers in the Brazilian Caatinga. *Science of the Total Environment*, v. 571, p. 1048-1057.
- Azevedo-Silva, Claudio Eduardo ; Almeida, Ronaldo ; Carvalho, Dario P. ; **Ometto, Jean P.H.B.** ; De Camargo, Plínio B. ; Dorneles, Paulo R. ; Azeredo, Antonio ; Bastos, Wanderley R. ; Malm, Olaf ; Torres, João P.M. Mercury biomagnification and the trophic structure of the ichthyofauna from a remote lake in the Brazilian Amazon. *Environmental Research (New York, N.Y. Print)*, v. 151, p. 286-296, 2016.
- Deusdará, K. R. L. ; Forti, M. C. ; Borma, L. S. ; Menezes, R. S. C. ; Lima, J. R. S. ; Ometto, J. P. H. B. Rainwater chemistry and bulk atmospheric deposition in a tropical semiarid ecosystem: the Brazilian Caatinga. *Journal of Atmospheric Chemistry*, v. 1, p. 1-15, 2016.
- Bustamante, M. M. C., Roitman, I., Aide, T. M., Alencar, A., Anderson, L. O., Aragão, L., Asner, G. P., Barlow, J., Berenguer, E., Chambers, J., Costa, M. H., Fanin, T., Ferreira, L. G., Ferreira, J., Keller, M., Magnusson, W. E., Morales-Barquero, L., Morton, D., Ometto, J. P. H. B., Palace, M., Peres, C. A., Silvério, D., Trumbore, S. and Vieira, I. C. G. (2016), Toward an integrated monitoring framework to assess the effects of tropical forest degradation and recovery on carbon stocks and biodiversity. *Glob Change Biol*, 22: 92–109. doi:10.1111/gcb.13087
- Aguiar, A. P. D., Vieira, I. C. G., Assis, T. O., Dalla-Nora, E. L., Toledo, P. M., Oliveira Santos-Junior, R. A., Batistella, M., Coelho, A. S., Savaget, E. K., Aragão, L. E. O. C., Nobre, C. A. and Ometto, J. P. H.

- (2016), Land use change emission scenarios: anticipating a forest transition process in the Brazilian Amazon. *Glob Change Biol*, 22: 1821–1840. doi:10.1111/gcb.13134
- Ometto, Jean P, Bun R, Jonas M, Nahorski Z, Gusti MI. Uncertainties in greenhouse gases inventories? expanding our perspective. *Uncertainties in Greenhouse Gas Inventories*. 1ed.: Springer International Publishing, 2015, v. , p. 1-8.
- Ometto JP, Aguiar AP, Assis T, Soler L, Valle P, Tejada G, Lapola DM, Meir P. Amazon forest biomass density maps: tackling the uncertainty in carbon emission estimates. *Uncertainties in Greenhouse Gas Inventories*. 1ed.: Springer International Publishing, 2015, p. 95-110.
- Carvalho AL, Menezes RSC, Nóbrega RS, Pinto AS, Ometto JPHB, von Randow C, Giarolla A. (2015). Impact of climate changes on potential sugarcane yield in Pernambuco, northeastern region of Brazil. *Renewable Energy*, v.78, p.26 - 34,
- Rezende, L. F. C. ; Arenque, B. C.; Aidar S.T.; Moura, M. S. B. ; Von Randow, C.; Tourigny, E.; Menezes, R. S. C.; Ometto, J. P. H. B. . Evolution and challenges of dynamic global vegetation models for some aspects of plant physiology and elevated atmospheric CO<sub>2</sub>. *International Journal of Biometeorology (Print)*, v. 59, p. 1-11, 2015
- Bustamante MMC, Martinelli LA, Pérez T, Rasse R, Ometto JPHB, Pacheco SF, Machado L, Silvia R, Marquina, S (2015) Nitrogen management challenges in major watersheds of South America. *Environmental Research Letters*, v.10, p.065007 - , 2015.
- Pacheco FS, Soares MCS, Assireu A, Curtarelli MP, Abril G, Stech JL, Alvalá PC, Ometto JP. (2015). The effects of river inflow and retention time on the spatial heterogeneity of chlorophyll and water-air CO<sub>2</sub> fluxes in a tropical hydropower reservoir. *Biogeosciences*, v.12, p.147 - 162, 2015.

### **Current Research Project**

- 2017 International Nitrogen Management System (INMS), catalyzed by The International Nitrogen Initiative, UNEP, and the Global Environment Facility.
- 2017 Forests 2020: collaborative programme to advance Earth Observation applications to forests. UK Space Agency.
- 2015 *LIDAR remote sensing of Brazilian Amazon forests: analysis of forest biomass, forest degradation, and secondary regrowth*". USAID PEER Funding
- 2014 DEVIL (Delivering Food Security on Limited Land. Projeto Temático (2014/50627-2). FAPESP/Beomont Forum/FACCE-JPI. Food Security and Land Use Change.
- 2013 *Abrupt changes in the provision of Ecosystem Services and well-being in African Woodlands*. ESPA/NERC – Ecosystem Service for Poverty Alleviation. Brazilian Pi.
- 2012 *Nitrogen Cycling In Latin America: Drivers, Impacts And Vulnerabilities (Nnet)*. Inter American Institute for Global Environment Change Research (IAI) – Coordinate Research Network (CRN3), Principal Investigator

**Current Supervision:** PhD – 07; Pos-Doc – 04

### **LINKs**

<http://scholar.google.com.br/citations?hl=pt-BR&user=i92eURkAAAAI>

<http://buscatextual.cnpq.br/buscatextual/visualizacv.do?metodo=apresentar&id=K4706491T9>

<http://www.researcherid.com/rid/B-3351-2013>