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Dr Pierre Bommel is a modeler scientist at CIRAD (French Agricultural Research Center for International Development). As member of the GREEN Research Unit, he contributes to promote the Companion Modeling approach (<http://www.commod.org>). His research interest focuses on Collective Design of models and Participatory Prospective Analysis. Through the development of CORMAS, a Framework for Agent-Based Models (ABM, <http://cormas.cirad.fr>), he has been focusing on the development and the use of ABM for renewable resources management. As associated professor in Brazil, at the university of Brasilia (UnB) then at Rio de Janeiro (PUC), he developed models related to environmental management, such as breeding adaptation to drought in the Uruguay or as breeding and deforestation in the Amazon. He is currently based at the university of Costa Rica as visiting professor where he works on prospective and adaptation to Climate Change in the Guanacaste, a dry region of Costa Rica. Committed to local stakeholders, he develops educational tools to raise watershed residents' awareness on water issues (pollution and overuse of groundwater and surface water).

Main publications linked with the BONDS proposal

Papazian, H., Queste, J., Bommel, P., & Bousquet, F., 2017. *The researcher and the territory: accompanying complexity*. In, Living territories to transform the world, Quae. pp. 191-198

Gray et al., 2017. *Purpose, Processes, Partnerships, and Products: 4Ps to advance Participatory Socio-Environmental Modeling*. Ecological Applications. doi:10.1002/eap.1627

Bommel et al., 2016. *The necessary burden of involving stakeholders in agent-based modelling for education and decision-making*. AGU Fall Meeting, San Francisco 12-16 Dec. 2016.

Lavelle et al., 2016. *Unsustainable landscapes of deforested Amazonia: An analysis of the relationships among landscapes and the social, economic and environmental profiles of farms at different ages following deforestation*. Global Environmental Change, 40, 137-155. <http://doi.org/10.1016/j.gloenvcha.2016.04.009>

Bommel et al., 2016. *Livelihoods of Local Communities in an Amazonian Floodplain Coping with Global Changes. From Role-Playing Games to Hybrid Simulations to Involve Local Stakeholders in Participatory Foresight Study at Territorial Level*. Proceedings of the 8th International Congress on Environmental Modelling and Software, July 10-14, Toulouse, France. ISBN: 978-88-9035-745-9. pp 1140-1147

Bommel et al., 2014. *New opportunities for small-scale farmers of the Amazon to strengthen hazards resilience while preserving forests – field experiments combined with agent-based modelling*. In: Forests under pressure – Local responses to global issues. IUFRO World Series Volume 32, 83-96. ISBN 978-3-902762-30-6.

Bommel et al. 2014. *A Further Step Towards Participatory Modelling. Fostering Stakeholder Involvement in Designing Models by Using Executable UML*. Journal of Artificial Societies and Social Simulation 17 (1) 6.

Bommel, P., Pocard-Chapuis, R., Bendahan, A.B., Coudel, E., 2012. *An ABM to Monitor Landscape Dynamics and to Undertake Collective Foresight Investigations in the Amazon*. Third Brazilian Workshop on Social Simulation (BWSS 2012), Curitiba, Brazil, pp. 91-98. DOI: 10.1109/bwss.2012.18

Coordination and participation to scientific Projects linked with the BONDS proposal

Ecotera (ANR) Ecoefficiencies and territorial development in the Brazilian Amazon (2014 - 2017). Responsible of the WP3.

Clim-Fabiam (FRB) Climate changes and Floodplain lake biodiversity in the Amazon Basin: how to cope and help the ecological and economic sustainability. (09/2012 – 09/2015) Responsible of the WP4

Odyssea (H2020, European Union) Observatory of the Dynamics of interactions between societies and Environment in the Amazon (on going).

EcoAdapt (European Union) Water management for local development to reduce vulnerability of human populations to climate change through capacity building, in Chile, Bolivia, Argentina (2012-2016)

FloAgri (European Union): Amazonian Forest and Agriculture : <http://www.floagri.org.br> (2005-2009)