

## OUVRAGES DE REFERENCE

- Aubin J, Bayen A, Saint-Pierre P. 2011. Viability Theory - New Directions. Springer Berlin Heidelberg.
- Aubin J-P. 1991. Viability Theory. Birkhäuser Boston.
- De Lara M, Doyen L. 2008. Sustainable Management of Natural Resources. Springer Berlin Heidelberg.
- Deffuant G, Gilbert N, editors. 2011. Viability and Resilience of Complex Systems. Springer Berlin Heidelberg
- Oubraham, A., & Zaccour, G. 2018. A Survey of Applications of Viability Theory to the Sustainable Exploitation of Renewable Resources. *Ecological Economics*, 145, 346-367.

## APPLICATIONS

### **Agroécologie**

- Accatino F, Sabatier R, De Michele C, Ward D, Wiegand K, Meyer KM. 2014. Robustness and management adaptability in tropical rangelands: a viability-based assessment under the non-equilibrium paradigm. *Animal* **8**:1272–1281.
- Durand, M. H., Désilles, A., Saint-Pierre, P., Angeon, V., & Ozier-Lafontaine, H. 2017. Agroecological transition: A viability model to assess soil restoration. *Natural Resource Modeling*, 30(3).
- Sabatier R, Doyen L, Tichit M. 2010. Modelling trade-offs between livestock grazing and wader conservation in a grassland agroecosystem. *Ecological Modelling* **221**:1292–1300.
- Sabatier R, Doyen L, Tichit M 2012, Action versus result-oriented schemes in a grassland agroecosystem: a dynamic modelling approach. *PLoS ONE* 7(4): e33257.
- Sabatier R, Oates LG, Jackson RD. 2015. Management flexibility of a grassland agroecosystem: A modeling approach based on viability theory. *Agricultural Systems* **139**:76–81.
- Sabatier R, Teillard F, Rossing WAH, Doyen L, Tichit M. 2015. Trade-offs between pasture production and farmland bird conservation: exploration of options using a dynamic farm model. *Animal* **9**:899–907.
- Sabatier, R., Joly, F., & Hubert, B. 2017. Assessing both ecological and engineering resilience of a steppe agroecosystem using the viability theory. *Agricultural Systems*, 157, 146-156.
- Angeon, V., Bates, S., Diman, J. L., Fanchone, A., & Saint-Pierre, P. 2010. Systemic Vulnerability vs Resilience in Small Island Territories: Keys for a Viable Adaptation of the Agricultural Sector. *Advances in Animal Biosciences*, 1(2), 515.
- Tichit M, Doyen L, Lemel JY, Renault O, Durant D. 2007. A co-viability model of grazing and bird community management in farmland. *Ecological Modelling* **206**:277–293.
- Tichit M, Hubert B, Doyen L, Genin D. 2004. A viability model to assess the sustainability of mixed herds under climatic uncertainty. *Animal Research* **53**:405–417.

### **Résilience de système écologique**

- Martin S. 2004. The cost of restoration as a way of defining resilience: a viability approach applied to a model of lake eutrophication. *Ecology and Society* **9**:8.

Rougé C, Mathias J-D, Deffuant G. 2013. Extending the viability theory framework of resilience to uncertain dynamics, and application to lake eutrophication. *Ecological Indicators* 29:420–433.

### **Politiques environnementales**

Mouysset L, Doyen L, Jiguet F. 2014. From Population Viability Analysis to Coviability of Farmland Biodiversity and Agriculture: Coviability of Farmland Biodiversity and Agriculture. *Conservation Biology* 28:187–201.

Mouysset L., Doyen L., Jiguet F., Allaire G., Leger F., 2011, Bio economic modeling for a sustainable management of biodiversity and agriculture, *Ecological Economics*, 70, 4, 617-626. Available on line

Pereau J.-C., Mouysset L. and Doyen L. 2017. Groundwater Management in a Food Security Context, *Environmental and Resource Economics*, 1--18. <http://dx.doi.org/10.1007/s10640-017-0154-3>

### **Systèmes agroalimentaires**

Mesmoudi S, Alvarez I, Martin S, Reuillon R, Sicard M, Perrot N. 2014. Coupling geometric analysis and viability theory for system exploration: Application to a living food system. *Journal of Process Control* 24:18–28.

Sicard N, Perrot N, Reuillon R, Mesmoudi S, Alvarez I, Martin S. 2012 A viability approach to control food processes: Application to a Camembert cheese ripening process *Food Control* 23 (2)

### **Pêcheries**

Béné C. & Doyen L., (2000), Storage and viability of a fishery with resource and market dephased seasonalities , *Environmental Resource Economics*, 15, 1-26.

Cissé, A., Doyen, L., Blanchard, F., Pereau, JC, Béné C., 2015, Ecoviability for small-scale fisheries in the context of food security constraints, *Ecological Economics*, 119, 39-52. (Rg 1 AgrEnEnv, IF 3.7). <http://www.sciencedirect.com/science/article/pii/S0921800915000440>

Cisse, A., Gourguet S., Doyen, L., Blanchard, F., Pereau, JC. 2013, A bio-economic model for the viable management of the coastal fishery in French Guiana, *Environmental and Development Economics*. Available on line

Curtin R., Martinet V., 2013, 'Viability of transboundary fisheries and international quota sharing: the case of the Bay of Biscay Anchovy', *Canadian Journal of Agricultural Economics*; vol. 61, p.259-282

Doyen L., Thébaud O., Béné C., Martinet V., Gourguet S., Bertignac M., Fifas S., 2012, A stochastic viability approach to ecosystem-based fisheries management, *Ecological Economics*, 75, 32–42. Available on line

De Lara M, Doyen L., Guilbaud T, Rochet M.J., 2007, Is a management framework based on spawning-stock biomass indicators sustainable? A viability approach, *Journal of Marine Science ICES J. Marine Science*, 64: 761 - 767. doi:10.1093/icesjms/fsm024

- Doyen L., M. De Lara, J. Ferraris, D. Pelletier, 2007, Sustainability of exploited marine ecosystems through protected areas: A viability model and a coral reef case study, *Ecological Modelling*, 208, 2-4, 353-366
- Doyen L. & Béné C., 2003, Sustainability of fisheries through marine reserve: a robust modeling analysis, *Journal of Environmental Management*, 69, 1, 1-13
- Doyen L., Bene C., Bertignac M., Blanchard F., Cissé A.-A.; Dichmont C., Gourguet S., Guyader O., Hardy P.-Y., Jennings S., Little R., Macher C., Mills D., Noussair A., Perea J.-C., Pascoe S., Sanz N., Schwarz A.-M., Smith T., Thébaud O. (to appear) *Ecoviability for Ecosystem Based Fisheries Management*, *Fish and Fisheries*. IF 8.5.
- Gourguet, S., Macher C., Doyen L., Guyader, O., Thébaud, O., 2013, Bio-economic modeling for the viable management of mixed fisheries, *Fisheries Research*, 140, 46–62. Available on line
- Hardy P.-Y., Béné C., Doyen L., Mills D. (forthcoming) Strengthening the resilience of small-scale fisheries: a modeling approach to explore the use of in-shore pelagic resources in Melanesia, *Environmental Modelling & Software*.
- Hardy P.Y., Doyen L. Béné C., Schwartz A.M. 2013. Food security - environment conservation nexus: a case study of Solomon Islands' small-scale fisheries. *Environmental Development*. Available on line
- Hardy P.Y., Doyen L., Béné C., Mills D. (2016) Viability and resilience of small-scale fisheries through cooperative arrangements, *Environmental and Development Economics*. 21, 6, pp. 713-741, <http://dx.doi.org/10.1017/S1355770X16000152>
- Martinet V; Thebaud O; Doyen L., 2007, Defining viable recovery paths towards sustainable fisheries, *Ecological Economics*, 64, 411-422. doi:10.1016/j.ecolecon.2007.02.036
- Martinet V., Peña-Torres J., De Lara M., Ramírez C. H., 2016, 'Risk and Sustainability: Assessing Fishery Management Strategies', *Environmental and Resource Economics*; vol. 64, p. 683-707.
- Martinet V., Thébaud O., Rapaport A., 2010, 'Hare or Tortoise? Trade-offs in recovering sustainable bioeconomic systems', *Environmental Modeling and Assessment*, vol 15(6), p.503-517
- Martinet V., Blanchard F., 2009, 'Fishery externalities and biodiversity: Trade-offs between the viability of shrimp trawling and the conservation of Frigatebirds in French Guiana', *Ecological Economics*, vol 68(12), p.2960-2968.
- Martinet V., 2010, 'La "viabilité", une approche du développement durable visant à éviter les crises dans le long terme : l'exemple des pêcheries' ('Viability, an approach to Sustainable development based on crisis avoidance: the fishery example'), *INRA Sciences Sociales* N°1/2010
- De Lara M., Martinet V., 2009, Multi-criteria dynamic decision under uncertainty: a stochastic viability analysis and an application to sustainable fishery management, *Mathematical Biosciences*, vol 217, p.118-124.
- Thebaud O., Ellis N., Little L.R., Doyen L., Marriott R., 2014, Viability trade-offs in the evaluation of strategies to manage recreational fishing in a marine park, *Ecological Indicators* <http://www.sciencedirect.com/science/article/pii/S1470160X14002155>

## **Ressources naturelles**

- Béné C., Doyen L. & Gabay D., (2001), A Viability Analysis for a Bio-economic Model, *Ecological Economics*, 36, pp 385-396. Available on line

- Chapel L, Deffuant G, Martin S, Mullon C Defining yield policies in a viability approach  
Ecological Modelling 212 (1-2), 2008
- De Lara M, Martinet V, Doyen. L, 2014, Satisficing versus Optimality: Criteria for Sustainability,  
Bulletin of Mathematical Biology. Available on line
- Doyen L., Cissé A., Gourguet S. Mouysset L., Hardy P.-Y, Béné C., F. Blanchard, Jiguet F., Perea  
J.-C., Thébaud O. 2013. Ecological-economic modelling for the sustainable management  
of biodiversity, Computational Management Science Available on line
- Doyen L., Martinet V., 2012, Maximin, Viability and Sustainability, Journal of Economic  
Dynamic and Control, 36, 9, 1414–1430. Available on line
- Doyen L., Perea J.C., 2012, Sustainable coalitions in the commons, Mathematical Social  
Sciences. 63 (2012) 57–64. Available on line
- Mathias, J.-D., Bonté, B., Cordonnier, T., de Morogues, F. Using the Viability Theory to Assess  
the Flexibility of Forest Managers Under Ecological Intensification, 2015, Environmental  
Management 56(5), pp 1170 -1183
- Martinet V. & Doyen L., (2007), Sustainable management of an exhaustible resource: a viable  
control approach, Resource and Energy Economics, 29, 1, 17-39
- Perea J.C., Doyen L., Little R., Thebaud O., 2012, The triple bottom line : Meeting ecological,  
economic and social goals with Individual Transferable Quotas, Journal of  
Environmental Economics and Management, 63, 3, 419–434. Available on line
- Rapaport A and Terreaux J. P. and Doyen L., 2006, Sustainable management of renewable  
resource: a viability approach, Mathematics and Computer Modeling. 43, 466-483