



## **Announcement Master 2 Internship Ecological-economic scenarios of biodiversity and land-use in the Nouvelle Aquitaine region**

Sujet: Terrestrial biodiversity and ecosystem services are under pressure worldwide. Although the literature on ecosystem services has risen in the past years, the synergies or trade-offs between human well-being and the different services including provisioning, recreational and regulating services are still under debate and the choice of policy instruments for sustainable land-uses remains open (Bateman et al., 2013; Doyen, 2018). In that perspective, there is a need of quantitative methods, models, indicators and scenarios in line with IPBES (International Platform on Biodiversity and ecosystem services) initiative. In line with such challenges, the interdisciplinary **project BIRDLAND** coordinated by Luc Doyen at GREThA aims at providing at the scale of the (new) Aquitaine Region ecological-economic scenarios relying on spatio-temporal models of terrestrial biodiversity and land-use in a context of climate change. More specifically, **the master 2 internship** funded by the project BIRDLAND and **entitled 'Ecological-Economic scenarios of biodiversity and land-use in the Nouvelle Aquitaine region'**, consists in downscaling to the New Aquitaine scale and refine existing models and scenarios initially developed at French scale (Ay et al., 2014, 2016; Mouysset et al., 2012; 2013; 2014; 2015;). The internship will especially focus on farming, forestry and urban land-uses together with bird biodiversity. Ecological-economic projections of different ecosystem services including food production, timber production, recreational services and water quality as well as biodiversity metrics will be done at the 2050 horizon.

Mots-clefs: Occupations des sols, biodiversité, services éco-systémiques, économie écologique, modélisation, scénarios.

Profil recherché : Ce stage s'adresse à des étudiants en master 2 ayant une formation en économie des ressources renouvelables, économie des risques et/ou de la biologie de la conservation. L'étudiant devra être intéressé par la recherche appliquée, l'aide à la décision et la modélisation dans une perspective interdisciplinaire.

Lieu : GREThA (Groupe de Recherche en Economie Théorique et Appliquée, <http://gretha.u-bordeaux.fr/fr>), Université Bordeaux

Encadrement : Luc Doyen (CNRS, Université de Bordeaux)

Durée : 6 mois (gratification 550 euros/mois); Courant 2021

Contact : [luc.doyen@u-bordeaux.fr](mailto:luc.doyen@u-bordeaux.fr)

### Références:

- Ay JS, Chakir R, Doyen L, Jiguet F, Leadley P (2014) Integrated models, scenarios and dynamics of climate, land use and common birds. *Climatic changes*, 126, 13-30
- Bateman I. et al. (2013). Bringing ecosystem services into economic decision-making: land-use in the United Kingdom. *Science*, 341,45-50.
- Mouysset L, Doyen L, Pereau JC, Jiguet F., 2015, Costs and benefits of biodiversity in agricultural public policies. *European Review of Agricultural Economics*, 42, 51-76
- Doyen L. (2018) Mathematics for scenarios of biodiversity and ecosystem services, *Environmental Modeling and Assessment*. <https://link.springer.com/article/10.1007/s10666-018-9632-4>