

# MODELE CURRICULUM VITAE

## Etat civil

- **Nom\* Prénom\*Barot, Sébastien**
- Né en 1970

## Situation à l'Académie :

- **Elu correspondant en 2019** et membre en 20..\*
- **Section X** \* Environnement et Territoires
- Groupe de travail \* (à indiquer)
- Fonction exercée\* Directeur de Recherche de l'IRD

## Rubriques à renseigner :

**Titre\* ou Situation actuels\* Directeur de Recherche de première Classe à l'IRD**

## **Coordonnées :**

- **Professionnelles\***
- **IEES-P, Sorbonne Université, Bâtiment 44-45, deuxième étage, bureau 208, CC 237, 4 place Jussieu, 75252 Paris cedex 05**
- **Adresse principale**
- **19 Rue de la Cour des Noues, 75020 Paris**
- Adresse secondaire
- **Région de rattachement\***
- **N° portable\* 06 21 37 84 70**
- **N° téléphone autre**
- **Adresse e.mel personnelle**
- **Adresse e.mel professionnelle\*sebastien.barot@ird.fr**

## **Formations\***

1994 Diplôme d'ingénieur forestier, FIF-ENGREF, Nancy

1999 Doctorat en Ecologie, Université Pierre et Marie Curie

2007 Habilitation à diriger des Recherches en Ecologie, Université Pierre et Marie

## **Carrière (principaux postes occupés)\***

Chercheur au laboratoire d'Etude des Sols Tropicaux (Bondy)

Chercheur au laboratoire Bioemco

Chercheur à l'Institut d'Ecologie et des Sciences de l'Environnement

## **Domaines d'expertise (6 au maximum)\***

Ecologie des sols

Ecologie des écosystèmes

Agro-écologie

Modélisation mathématique

Ingénierie écologique

### **Mots clés \***

Vers de terre, sols, azote, Afrique de l'Ouest, savane, nitrification, services écosystémiques

### **Distinctions et prix éventuels**

### **Fonctions actuelles ou récentes**

Directeur de Recherche à l'IRD

### **Activités académiques ou professionnelles**

### **Vice-président de la société Française d'Ecologie et d'Evolution**

### **Publications, Rapports ou Articles (10 maximum)**

Fontaine, S., and S. Barot. 2005. Size and functional diversity of microbe populations control plant persistence and long-term soil carbon accumulation. *Ecol. Lett.* 8:1075-1087.

Fontaine S., Barot S., Barré P., Bdioui N., Mary B. & Rumpel C. 2007 Stability of organic carbon in deep soil layers controlled by fresh carbon supply. *Nature*, 450, 277-281

Boudsocq, S., A. et al.. 2012 Plant preference for ammonium versus nitrate: a neglected determinant of ecosystem functioning? *Am. Nat.* 180:60-69

Perveen, N., S. Barot, G. Alvarez, K. Klumpp, R. Martin, A. Rapaport, D. Herfurth, F. Louault, and S. Fontaine. 2014. Priming effect and microbial diversity in ecosystem functioning and response to global change: a modeling approach using the Symphony model. *Glob. Chang. Biol.* 20:1174-1190.

Barot, S., S. Bornhofen, N. Loeuille, N. Perveen, T. Shahzad, and S. Fontaine. 2014. Nutrient enrichment and local competition influence the evolution of plant mineralization strategy, a modelling approach. *Journal of Ecology* 102:357-366.

Barot S et al.. 2015 Evolving away from the linear model of research: a response to Courchamp et al. *Trends Ecol. Evol.* 30, 368–370

Barot, S., S. Bornhofen, S. Boudsocq, X. Raynaud, and N. Loeuille. 2016. Evolution of nutrient acquisition: when space matters. *Functional Ecology* 30:283-294.

Zou, K., E. Thébault, G. Lacroix, and S. Barot. 2016. Interactions between the green and brown food web determine ecosystem functioning. *Func. Ecol.* 30:1454-1465.

Barot, S., V. Allard, A. Cantarel, J. Enjalbert, A. Gauffreteau, I. Goldringer, J.-C. Lata, X. Le Roux, A. Niboyet, and E. Porcher. 2017. Designing mixtures of varieties for multifunctional agriculture with the help of ecology. A review. *Agronomy for Sustainable Development* 37:13.

### **Activités éditoriales**

Editeur associé à *Agriculture for Sustainable Development*

Recommandeur pour *Peer Community in Ecology*

### **Short Bio (anglais)**

S. Barot has been working for the French Institute for Research for the Development (IRD) since 2002 and been promoted as “senior scientist” in 2011 in the Institute for Ecology and Environmental Sciences-Paris. He is now working on different subjects of soil and ecosystem ecology, mostly on aboveground-belowground interactions, nutrient cycling and soil biodiversity. He has conducted studies on the dynamics of soil organic matter and the modelling of this dynamics. He is also involved in many projects about vegetation dynamics and plant demography. In all his researches he has combined field work in savannas (mostly Ivory Coast), experimentations in controlled conditions and mathematical modelling. He is strongly interested in Ecological Engineering and agro-ecology. For example, he is currently working on the impact of within field mixtures of wheat varieties on biodiversity and ecosystem services. He has developed models of nutrient cycling and soil organic matter dynamics mostly in the context of plant-soil feedbacks. He is currently vice-president of the French Society for Ecology and Evolution and vice-president of the Scientific Committee of the Foundation for Research on Biodiversity.