Supplementary section (Supplementary material Rutgers et al.).

Table S1. General Linearized regression Models (GLMs) of data on eleven soil biological attributes in the first monitoring cycle in the Netherlands Soil Monitoring Network 1999-2004 [11]. The predictive environmental properties marked yellow and orange (constants a – u in Eq. 1 had respectively a positive and negative significant contribution to the.

Attribute	Exlained variation	Intercept	Dairy grass	Arable	Semi-natural grass	Heather	Loess	Alluvial clay	Peat	Sand	$pH_{(KCl)}$	SOM (%)	Clay (%)	Latitude (X^2)	Longitude (Y^2)	$pH_{(KCl)^2}$	$SOM(\%)^2$	$Clay(\%)^2$	$P(al)^2$
Richness Enchytraeids	**36**	2.62	4.9	4.1	8.9	0	0	0	2.4	2.7	0	0	0	0	0	0	0	0	−4.2E-04
Abundance Enchytraeids	**28**	32584	18545	0	0	0	0	−24992	0	0	0	0	990	0	0	0	0	0	0
Richness Earthworms	**61**	−0.87	2.8	0	5.0	0	0	0	0	0	0.50	0	068	0	0	0	0	0	0
Abundance Earthworms	**52**	−36.2	185	0	0	0	0	0	0	0	0	0	22	0	0	0	0	-0.32	0
Richness Nematodes	**25**	16.8	7.7	7.7	11.4	−2.1	−4.7	0	0	0	0	0	0	0	0	0	0	0	0
Abundance Nematodes	**61**	306	1974	0	0	0	0	-2070	0	0	0	178	0	0	0	0	0	0	0
Richness Micro-arthropods	**35**	154	0	−7.9	0	−31.2	0	0	0	0	−43.4	0	0	0	0	3.6	0	0	0
Abundance Micro-arthropods	**57**	356669	−60017	−76166	0	0	0	0	0	0	−82034	0	0	0	0	6119	0	0	0
Bacterial activity (leucine incorp)	**53**	−305	255	0	0	0	0	0	−724	0	103.8	0	17.4	0	0	0	0.82	0	0

Bacterial C-mineralization	**72**	46.9	0	−46	0	0	0	0	135	0	0	6.1	0	0	0	0	0	0	0
Bacterial N-mineralization	**54**	2.43	5.1	0	7.1	0	0	0	15	0	0	0	0	0	1.7E−11	−0.11	0	0	0

Table S2. Biological attributes contributing to the soil biodiversity model for the soil biodiversity map of Europe. Data were obtained from the EU FP7 project EcoFINDERS [17,21,33].

Attribute	Formulae
Microbial biomass	Median values of land use*climate domains
Bacterial abundance	Median values of land use*climate domains
Bacterial diversity	Median values of land use*climate domains
Earthworm abundance	Earthworm_abun = -4710+151*latitude-1.49*latitude^2+117*pH-8.03*pH^2+11.8*SOM-0.167*SOM^2-1.03*sand+2801*agricultural grass-43.9*forest-89.9*heath-0.151*elevation+7.17*10^-5+elevation^2+99.8*tempmax-3.09*tempmax^2-10.2*precipmin+0.0593*precipmin^2-0.0117*precipmax^2+4.46*precipaverage
Earthworm diversity (Shannon)	Earthworm_divers = -1.54-1.5*10^-4*latitude^2-1.27*10^-3*longitude^2+0.907*pH-0.0708*pH^2+0.0102*sand-1.31*10^-4*sand^2-0.380*cropland-0.564*vineyard-0.163*forest-0.386*heath-1.22*10^-7*elevation^2+4.8*10^-3*precipmin
Earthworm richness	Earthworm_rich = 9.48-9.27*10^-4*latitude^2-0.0492*longitude-4.73*10^-4*SOM^2+0.0390*sand-5.80*10^-4*sand^2-0.581*agriculture-1.92*cropland-2.75*vineyard-1.66*forest-1.86*heath-7.98*10^-1*elevation^2-6.37*10^-3*tempmax^2+5.56*10^-3*precipmin