

Dataset

Environmental impacts and mitigation effectiveness of strategic perennialization

Contact

Oskar Englund (oskar.englund@miun.se)

Reference

Englund, O., Börjesson, P., Berndes, G., Scarlat, N., Dallemand, J.-F., Grizzetti, B., Dimitriou, I., Mola-Yudego, B., & Fahl, F. (2020). Beneficial land use change: Strategic expansion of new biomass plantations can reduce environmental impacts from EU agriculture. *Global Environmental Change*, 60, Article 101990. <https://doi.org/10.1016/j.gloenvcha.2019.101990>

Type

Shapefile

Geographic coverage

EU27+UK

CRS

ETRS89-LAEA Europe (EPSG:3035)

Fields

Name	Description
fid	Identifier
area	Area in hectares
river_len	Total length of watercourses in meters
an_cr_den	Density of annual crops <u>Values:</u> 1: very low 2: low 3: medium 4: high 5: very high
wa_er_cl	Degree of water erosion. Values as for an_cr_den
wi_er_cl	Degree of wind erosion. Values as for an_cr_den
flood_cl	Degree of recurring floods. Values as for an_cr_den
SOC_cl	Degree of accumulated losses of soil organic carbon. Values as for an_cr_den
N_em_cl	Degree of nitrogen emissions to water. Values as for an_cr_den
eff_wa_er	Mitigation effectiveness by strategic perennialization for water erosion <u>Values:</u> 1: marginal 2: low

	3: medium 4: high 5: very high
eff_wi_er	Mitigation effectiveness by strategic perennialization for wind erosion. Values as for eff_wa_er
eff_N_em	Mitigation effectiveness by strategic perennialization for N emissions. Values as for eff_wa_er
eff_SOC	Mitigation effectiveness by strategic perennialization for accumulated losses of soil organic carbon. Values as for eff_wa_er
eff_flood	Mitigation effectiveness by strategic perennialization for recurring floods. Values as for eff_wa_er
an_cr_area	Area of annual crops in hectares
NUTS3	NUTS3 code
country	country
wa_er	Annual average soil loss by water erosion on land used for production of annual crops (t soil loss/ha/y)
wi_er	Annual average soil loss by wind erosion on land used for production of annual crops (t soil loss/ha/y)
N_em	Annual average diffuse nitrogen emissions to water (kg N/ha/y)
flooding	Share of landscape area subject to 10-year flooding (%)
SOC	Average soil organic carbon saturation capacity on land used for production of annual crops (ratio of current SOC divided by theoretical max SOC)