



# Developing mechanisms for estimating carbon footprint in farming systems

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## Introduction

Sustainable land management is critical to avoid land degradation and to reclaim degraded land for its productive use and for reaping the benefits of crucial ecosystem services and protecting biodiversity. It also helps in mitigating and adapting to climate change. Land and its various uses are affected severely by climate change too (flooding, droughts, etc.). Existing tools and technologies for efficient land management need to be adapted and their application expanded.



A large number of human livelihoods and ecosystems can benefit from these tools and techniques since these yield multiple benefits. Disseminating and scaling up the implementation of sustainable land management approaches will, however, need to be backed up by mobilizing strong political will and financial resources.



Sampling points

## Regression model

To provide an integral decision support tool that can establish relationships between soil carbon content, climate change and land use and management aspects that allow stakeholders to detect, cope with and intervene into land system change in a sustainable way.

Var	SOCC 0-25	SOCC 25-50	SOCC 50-75	SOCC 0-75	Emmision
(Constante)	-136,897	-96,397	75,78	191,734	1479,644
USO_HERBNO_211	-4,441	-	-	-	-
USO_HERBNO_212	-	2,497	-4,492	-14,384	-
USO_HERBNO_212	-16,854	-	-	-	-
USO_FRUIT_222	-	1,321	-2,041	8,13	-
USO_TRIGO_1	-	-	-	-	50,223
USO_NARANJO_4	-	-	-	-	6,121
USO_ALMENDRO_5	-	-	-	-	-
Tº Verano (ºC)	-1,017	-3,043	-9,082	-3,831	-1,147
TºInviero (º C)	16,982	15,934	16,496	38,409	-96,348
Precip. Total Anual (mm)	-	-	-	-	-0,777
Elevación (m)	-0,039	0,065	0,063	0,038	-0,814
Pendiente (%)	-	-	-	-	-
Humedad Suelo (cm <sup>3</sup> cm <sup>-3</sup> )	-	-	-	-	97,768
Temp. Suelo (ºC)	-	-	-	-	1,185
ERO2	-1,239	-5,961	-11,613	(v) -7,741	-
DRE2	-2,213	-2,068	-3,793	(v)-8,979	-
DRE3	12,854	1,381	-4,278	(v)14,777	-
SOCC25	-	-	-	-	-
Arcilla (g/100g) 0-25 cm	-	-	-	-	-
Arena (g/100g) 0-25 cm	-	-	-	-	-
pH 0-25 cm	-2,547	-0,336	-2,132	-7,989	-
Nitrógeno (mg/Kg) 0-25 cm	162,494	89,053	105,151	232,745	-16,157
Carbono orgánico (mg/Kg) 0-25 cm	-	-	-	-	10,494
Carbonato cálcico (%CaCO <sub>3</sub> ) 0-25 cm	-	-	-	-	0,231
Densidad aparente (g/cc) 0-25 cm	10,991	7,089	-0,543	-246,973	-
Capacidad de Campo g/100 g 0-25 cm	-0,134	0,0220,829	0,042	-2,182	-
R <sup>2</sup>	<b>0,928</b>	<b>0,967</b>	<b>0,829</b>	<b>0,957</b>	<b>1</b>

## ClimaLAND platform model evaluation

## ClimaLAND platform social