

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

GLOBAL SOIL PARTNERSHIP

Regional Soil Partnership of Central America, Caribbean and Mexico

Regional Training on Digital Soil Organic Carbon Mapping

26 to 30 June 2017

National Laboratory of Modelling and Remote Sensing (LNMySR), INIFAP
Aguascalientes, Mexico

Agenda



Sunday 25 June

Arrival at the International Airport of Aguascalientes (AGU)
Transport to the hosting hotel

Lunes 26 June – Fundamentals and Regional Stock-taking

Time	Agenda
07:00 – 08:00	Breakfast
08:30	Transport to the LNMySR
09:00 – 09:30	Opening ceremony
09:30 - 10:00	Regional diagnostic and stock-taking of actions within the Regional Training to handle the production and integration of the Regional Map into the GSOCMap
10:00 – 12:30	Mathematic functions between soil organic carbon (SOC) and the covariates of study: Landscape Landform Landparent Land Landcover/Landuse/Landchange Climate
12:30 – 13:00	Processes to improve the estimations of soil carbon in Mexico
13:00 – 14:00	Lunch
14:00 – 15:30	Fundamentals of multivariate statistics, linear methods and geostatistics (descriptive and multivariate) focused on the analysis, classification, regression and propagation of the soil carbon data, emphasizing interpolation and extrapolation methods for grid based data at a 1km spatial resolution
15:30 – 17:00	Fundamentals of R under open source environments for Linux and Windows.
17:00 – 17:30	Transport to the hosting hotel

Tuesday 27 June – Digital Mapping based on a full and structured data set

Time	Agenda
07:00 – 08:00	Breakfast
08:30	Transport to the LNMySR
09:00 – 10:00	Demonstration of two full routines of digital soil mapping (one on profiles and another on drills/cores) including the estimation of associated uncertainties
10:00 – 10:15	Presentation of the Mexican Soil Information System (provided by INEGI)
10:15 – 13:00	Data base harmonization of the INEGI data base in R code to be implemented by all participating countries
13:00 – 14:00	Lunch
14:00 - 16:00	Exercises on prepared scripts oriented to the interpolation and extrapolation of carbon values at different scales and weight factors of the covariates maps of the INEGI Soil Information System
16:00 – 17:00	Analisis and modelling of hydrometeorological data in R to build the Regional Soil Organic Carbon Map
17:00 – 17:30	Transport to the hosting hotel

Wednesday 28 June – National data base harmonization

Time	Agenda
07:00 – 08:00	Breakfast
08:30	Transport to the LNMySR
09:00 – 12:00	Harmonization and systematization of the national data bases provided by the participating countries (in csv format) for a common R code
12:00 – 13:00	Script generation through practical step by step demonstrations in R and SAGA on topographical, climatic, pedological and anthropogenic sequences
13:00 – 14:00	Lunch
14:00 – 15:00	Script generation through practical step by step demonstrations in R and SAGA on topographical, climatic, pedological and anthropogenic sequences
15:00 – 17:00	Interpolation exercises through regression trees and statistical simulations of the predictive model residuals to estimate the associated uncertainties
17:00 – 17:30	Transport to the hosting hotel

Thursday 29 June – Script generation and national SOC prediction models

Time	Agenda
07:00 – 08:00	Breakfast
08:30	Transport to the LNMySR
09:00 – 14:00	Extrapolation oriented to the carbon value propagation to the regions with low or no soil information density, based on the similarity of covariates in countries with more information
14:00 – 15:00	Lunch
14:00 – 17:00	Validation and calibration of the different SOC prediction models in the different countries according to the level of available original information
17:00 – 17:30	Transport to the hosting hotel

Friday 30 June – Generation of National GIS and Metadata

Time	Agenda
07:00 – 08:00	Breakfast
08:30	Transport to the LNMySR
09:00 – 14:00	Practical strengthening of the script generation, construction and validation of models for predicting SOC for each of the countries of the region using their own national data
14:00 – 14:30	Evaluation of the regional training through an open dialogue between trainers and participants
14:30 – 15:30	Lunch
15:30 – 16:00	Building and delivery of the metadata registration system for sampling and analysis of SOC, stock calculations and upscaling data and covariates
16:00 – 16:30	Report of results from the regional training. Way forward and agreements for the follow up of the information production adapted for the needs of each country
16:30 – 17:00	Closure of the Regional Training

Saturday 1 July

Transport from the hosting hotel to the International Airport International of Aguascalientes (AGU)