RESEARCH PROGRAM ON Dryland Systems

CGIAR

Overview of Technical Analyses by the Core Team after the 1st Workshop in Zaghouan, November 2016

Quang Bao Le

System-based Options by Context

GeOC

A tool for better investment decisions in agriculture and rural development

Projet financé par la GIZ

"Evaluation de l'impact des options de GDT pour l'atteinte de la Neutralité en matière de Dégradation des Terres"

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

ICARDA

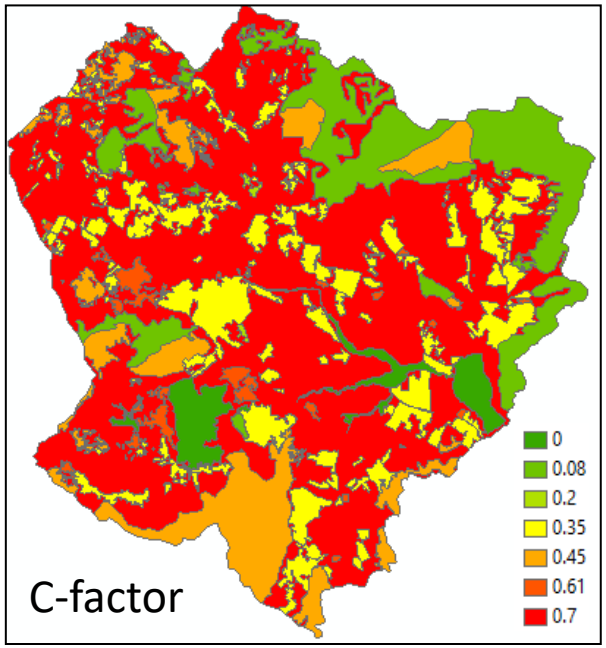
iMMAP

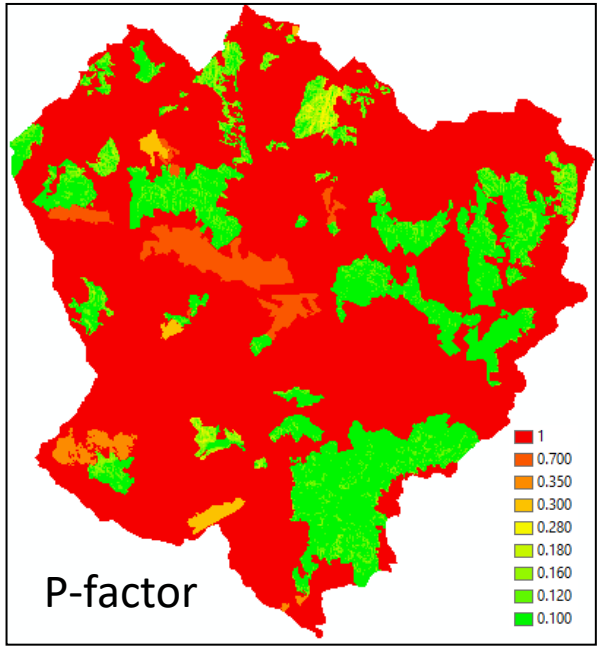
IRESA

Technical Analyses: GIS Data

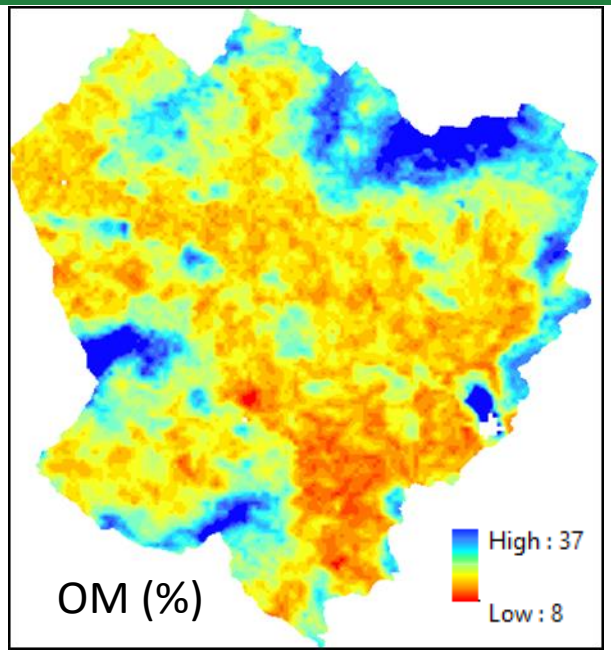
- Land use/cover: Improved/rectified by using Google Earth
- Mapping current Soil Water Conservation (SWC) practice: Digitized based on Google Earth
- Cover (C) and management (P) factors:
  - C-factor: calculated based on the improved land use/cover map
  - P-factor: calculated based on SWC map
- K factor calculated based on soil Organic Matter (OM) and soil texture (sand : silt : clay) (see next slide)

Maps of current cover (C) and Management (P) factors





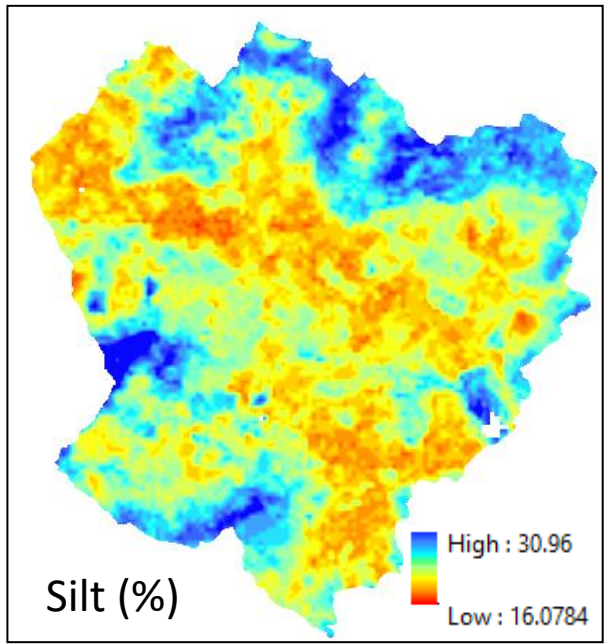
Calculation of soil erodibility (K factor)

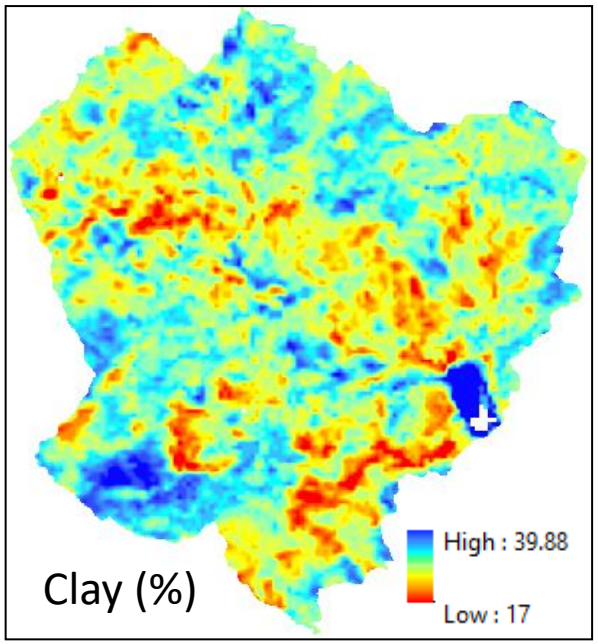


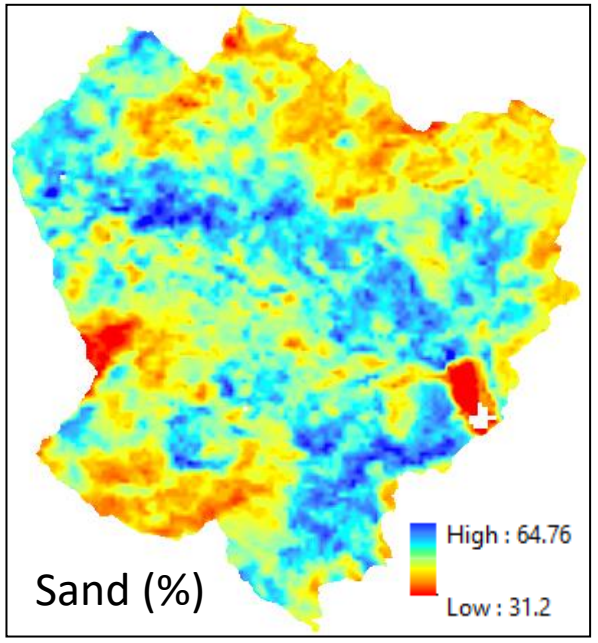
K factor calculated based on soil Organic Matter (OM) and soil texture (sand : silt : clay):

$$K = \frac{\left[2.1M^{1.14}(10^{-4})(12 - OM)\right]}{7.59}$$

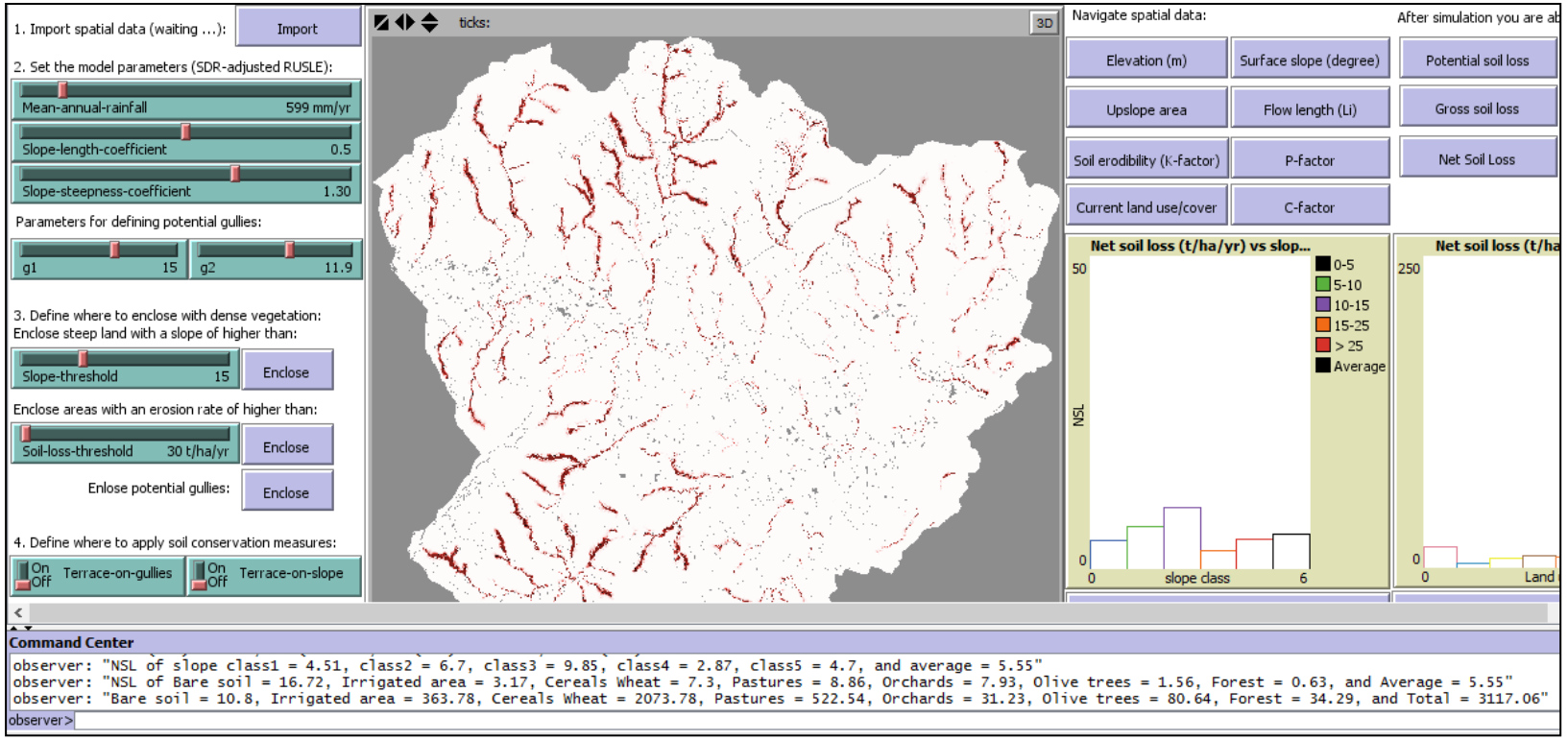
$$M = ((\%\text{silt} + \%\text{sand}) \times 100 - \%\text{clay})$$







Technical Analyses: improved version of iLAMPT



- iLAMPT: integrated Landscape Management Planning Tool
- Updated parameters
- Incoporated SWC options identified in the 1st workshop