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## Computing slope length (USLE): return to original definitions.

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Soil erosion is an important process of consideration in different erosion risk models and in planning soil conservation. Common erosion models, such as the USLE and its derivatives are widely used. In this context, the slope length is the variable with the most difficulties due to the different scales and procedures available that lead to very different results. Furthermore, many of the calculation procedures are based on a hydrological network definition that poses many problems in areas with a complex topography.

We propose an algorithm implemented in GIS, returning to the original field perspective form defined by the USLE and RUSLE, which is detached from the hydrological network definition. The calculation procedure is based on 5 m DEM and defines overland water flow at the field scale.

This method has been applied in three areas with different climate and geomorphology. The results are similar to those derived from aerial photograph observation.

### References

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