

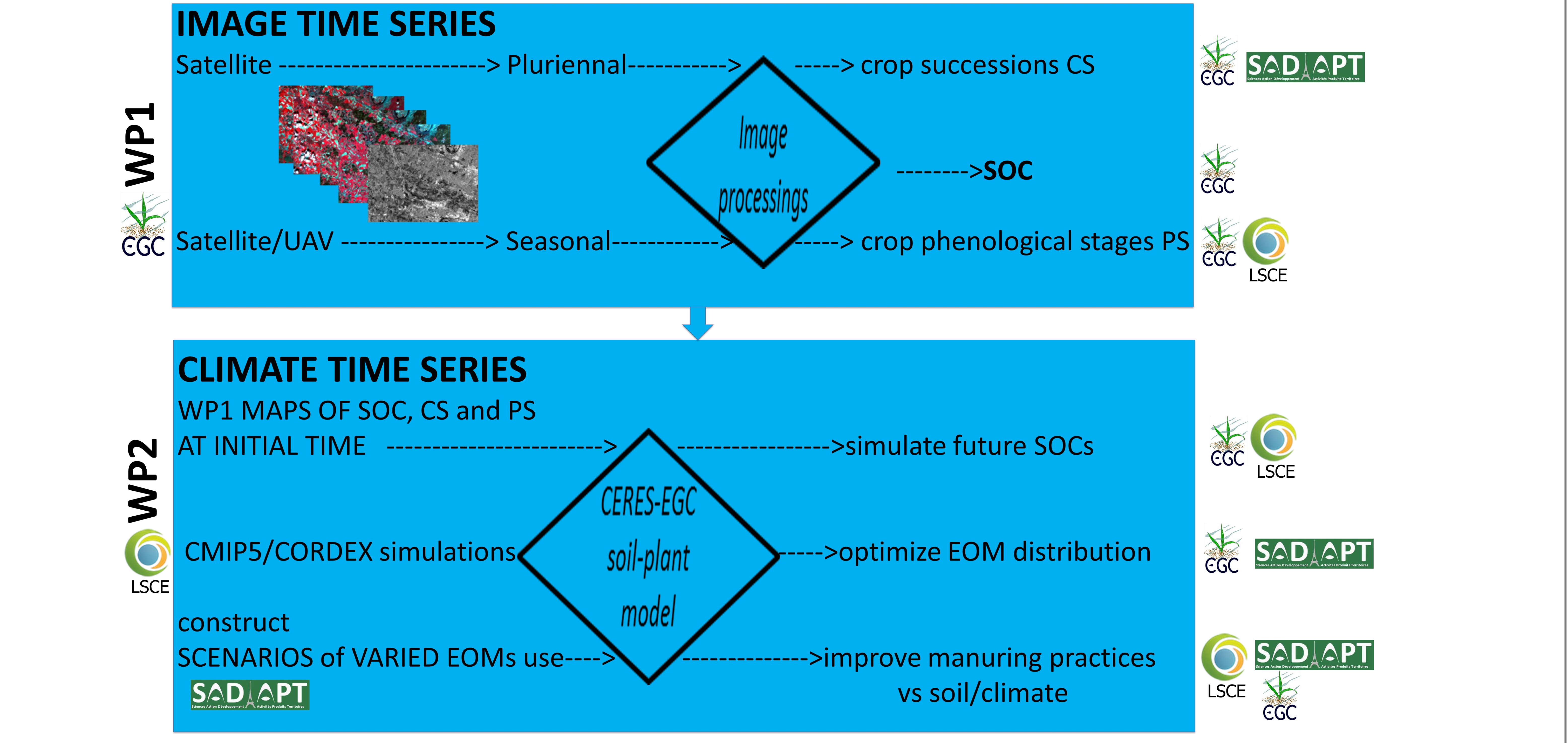
SOCSENSIT: Spatial dynamics of topsoil Organic Carbon with remote SENSing for croplands enriched with organic urban wastes over Time

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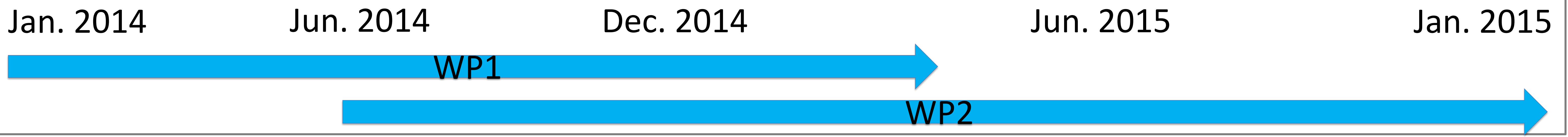
Objective
 Assess spatio-temporal variability of topsoil organic carbon (SOC), crop successions and phenological parameters in Versailles agricultural plain using high resolution remote sensing time series and develop optimization tools for exogenous organic matter (EOM) land application under present and future climate
Project start : Jan. 2014 Duration : 24 months



Structuration



Timetable



Publications from the project partners

- Vaudour E., Bel L., Gilliot J.M., Coquet Y., Hadjar D., Cambier P., Michelin J., Houot S., 2013. Potential of SPOT multispectral satellite images for mapping topsoil organic carbon content over peri-urban croplands. *Soil Science Society of America Journal*, 77, 2122-2139.
- Dhaouadi K, Aubry C Hadjar D, Gilliot JM, Parnaudeau V, Houot S. Potential substitution of mineral N fertilizers by organic residues at the territory scale. 15th International conference, RAMIRAN, Versailles, 3-5 juin 2013
- Kallel, A., C. Ottlé, S. LeHégarat, D. Courault, F. Maignan, 2013. Surface temperature downscaling from multi-resolution instruments based on MAP criterion and Markov models. *IEEE Trans. Geosci. Remote Sen.*, vol.51, no.3, pp.1588-1612, March 2013, doi: 10.1109/TGRS.2012.2207461.
- Vaudour, E., Gilliot, J.M., Bel, L., Bréchet, L., Hadjar, D., Hamiache, J., Lemonnier, Y., 2014. Uncertainty of soil reflectance retrieval from SPOT and RapidEye multispectral satellite images using a per-pixel bootstrapped empirical line atmospheric correction over an agricultural region. *International Journal of Applied Earth Observation and Geoinformation*, 26, 217-234.
- Maignan, F., Bréon, F.M., Bacour, C., Demarty, J., Poirson, A., 2008. Interannual vegetation phenology estimates from global AVHRR measurements - Comparison with in situ data and applications. *Remote Sensing of Environment*, 112, 496-505.
- Gabrielle B., Da-Silveira J., Houot S., Michelin J., 2005. Field-scale modelling of carbon and nitrogen dynamics in soils amended with urban waste composts, *Agriculture Ecosystems and Environment*, 110, 289-299.