

Soil carbon services

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<https://altusimpact.com/wp-content/uploads/2019/11/frame-617x295.png>

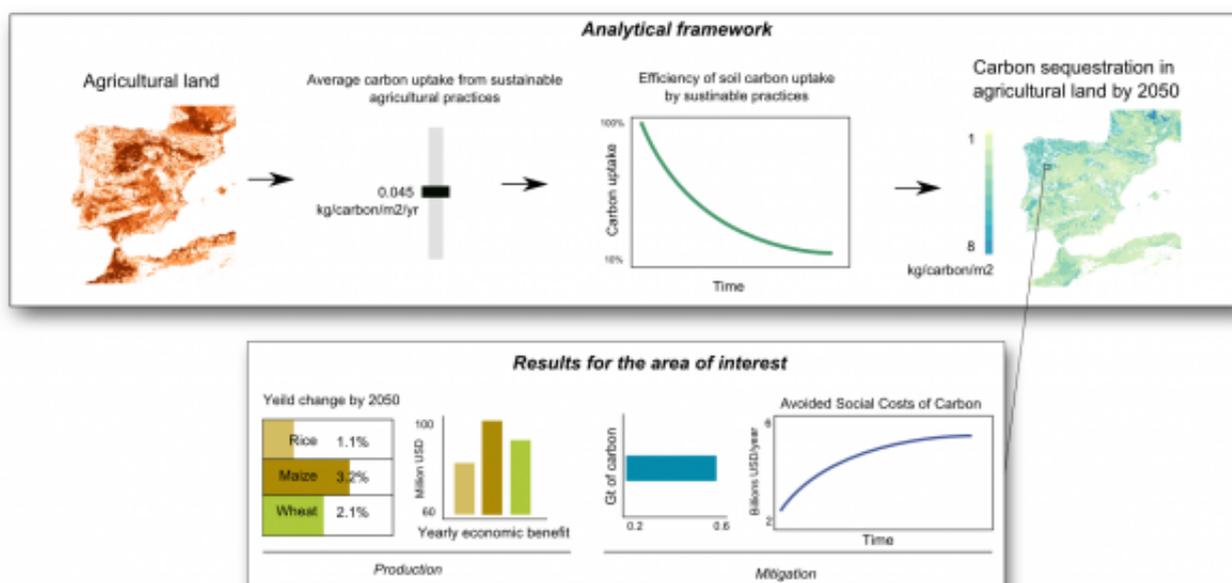
Vanja Westerberg and Luis Costa

We can provide:

- Soil organic carbon stocks for any place on the planet at 300 meters resolution
- Estimates of absolute rice, wheat and maize yields and yields gains as a result of increasing soil carbon stocks
- The value of such yield improvements, at farm gate level, national and international level
- Estimates of irrigation savings as a result of an increase in soil carbon stocks

Soil carbon: how do we measure it?

At Altus Impact we have developed a fast-track analytical routine and transferable methodology to evaluate changes in soil carbon, agricultural yields and water savings, for any location of the globe, as a result of initiatives such as the [4‰ initiative](#), or any other target. The 4‰ initiative has the goal of increasing soil organic carbon annually by 4‰ of its current stock through the implementation of sound agronomic practices.



Altus Impact analytical framework to estimate the biophysical and economic benefits of soil carbon sequestration

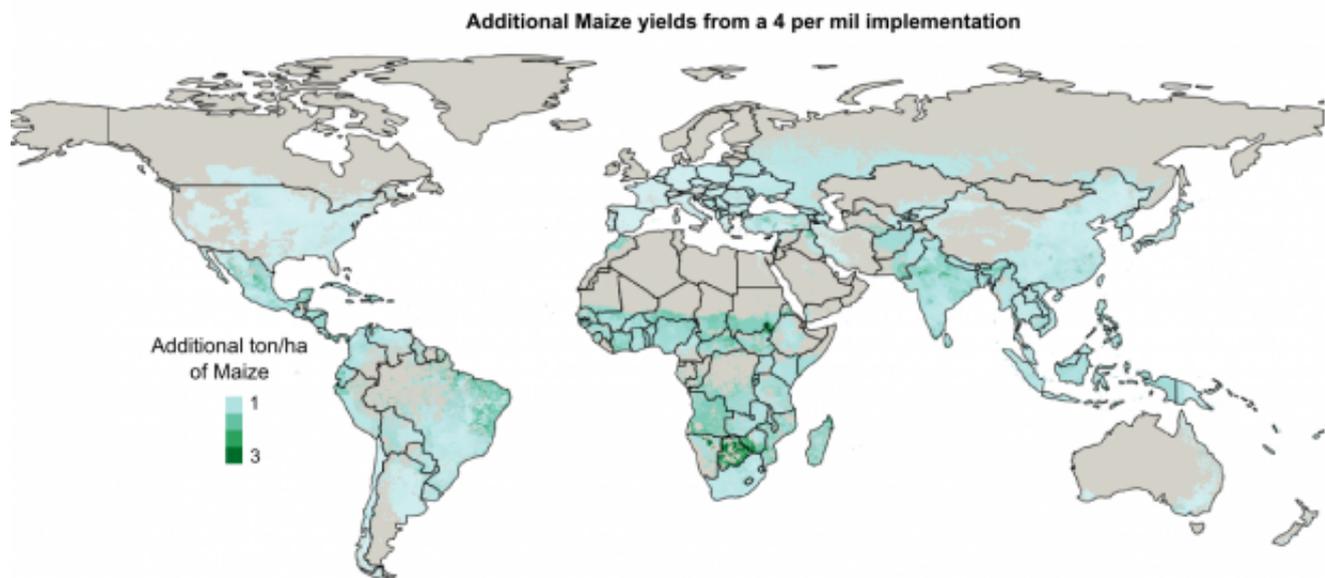
Based on high-resolution datasets of current carbon content, land cover data and a simplified temporal model of carbon uptake, Altus Impact can produce estimates of the total amount of carbon sequestered in agricultural land following a variety of sustainable agricultural practices.

We leverage on a published meta-analysis of crop response to enhanced soil carbon content - and correcting for country-specific yield heterogeneity - to develop projections of additional agricultural yield and the value of these over time.

The biophysical estimates of the benefits entailed in soil carbon sequestration are also expressed in monetary terms via the application of both country-specific and global market prices for commodities. The avoided Social Costs of Carbon are estimated using reference values and discount rates in specialized literature.

We deliver a fast-track summary including tables of quantified benefits (total carbon, avoided social costs of carbon, agricultural yield changes) as well as maps of carbon uptake potential by 2050. All results are delivered in excel format ready for further analysis by the end-user.

Example output



Percentage increase in agricultural output (2020-2050), as a result of increasing soil carbon stocks through agro-ecological practices