Clarification on calculating the C-sink in Global Artisan C-Sink v1

The Global Artisan C-Sink Standard v1 allows some interpretation in calculating the available C-sink. Therefore, this document aims to bring clarity to the calculations used.

1. In the Global C-Sink Registry, the following calculation is consistently utilized to calculate the amount CO2e in tonnes:

   Amount CO2e = dry_mass of biochar * c_content * 44/12

2. To calculate the margin of security of 3%, this calculation is employed (See in the graph below in gray):

   Security margin = dry_mass of biochar * c_content * 44/12 * 3%

3. In order to calculate the PAC fraction of the biochar, the amount CO2e will be multiplied with the 75%, e.g. when applied to soil (source: biochar-journal; see in the graph below in purple):

   PAC = Amount CO2e * 75%

1. To calculate the persistent available amount of the C-sink, the security margin is deducted from the PAC fraction (see in the graph below, the area between the purple line and gray area):

   Persistent available amount = PAC – security margin