

Clarification - Leakage emission Global Artisan C-Sink

The Global Artisan C-Sinks covers the aspects of leakage in different chapters. The standard as well defines clearly under which situations artisanal biochar produced and certified under the standard avoids the risk of leakage emissions:

1. *Page 10: The biomass was procured sustainably, e.g., farm residues, derived from biomass processing waste streams, or disaster debris but no forest wood except for C-sink cooking (Chapter 6).*
2. *Page 12: Artisan production is further defined by the fact that the biomass feedstock used for biochar production is either crop residues from a farm (e.g., straw, pruning, leaves, empty fruit bunches, shells, etc.), dedicated biomass production sites (e.g., bamboo plantation), biomass feedstock from fallow crop rotations, natural disaster biomass (e.g., after a tornado), or residues from crop processing (e.g., nut shells, coffee parchments, sawdust, pomace, etc.). C-Sink Cooks may also use forestry biomass.*
3. *Page 23: The restriction of eligible biomass for biochar production is explained by the intention to avoid by all means the overexploitation of ecosystems and the impairment of food security for the sake of C-sink maximation.*

In the Global Artisan C-Sink, there are 3 different biochar production ways defined:

1. **Farmer Networks:** Leakage is excluded by the standard, as only waste biomass from the farms may be used as feedstock. This is ensured by controlling the area productivity. The farm is the system boundary. It is therefore ensured that no additional biomass from local markets or other sources can be used, therefore no market shift is to be expected which would lead to leakage. As most biomass in a C-Sink Network benefits from methane avoidance, as the current treatment was open field burning and therefore no valorisation happened, leakage can be excluded as well.
2. **Artisan Cooks:** Here, the biomass that was otherwise used for cooking is now used more efficiently in new TLUD cookers. This eliminates leakage.
3. **Artisan Pro:** The biomass used for Artisan Pros, similar to Farmer Networks, are often crop residues with no valorisation at the moment, therefore market shifts are not to be expected. Forest wood is also excluded as a feedstock for Artisan Pro. However, we allow waste wood and also biomass that is produced specifically for the manufacture of feedstock (e.g. bamboo). However, in the PDD, the Artisan C-Sink Managers has already to state what the current treatment of the allowed biomass is. Theoretically, the biomass could also be used for charcoal production, animal feed or materials, which may now be replaced by other, possibly fossil raw materials. At this point in time, Artisan Pro's are not common and in project their numbers are small enough, that their influence on a regional market would be neglectable.

If the Artisan Pro networks grow substantially in the coming years, CSI will implement further safeguards to avoid leakage. The project region has to be defined already today, as part of the PDD. The same project region could be used as well as region of influence on regional markets. The project developer would have to showcase in the future, that the volume of biomass they estimate to use, is smaller than 25% of the total volume of this biomass available and sold on the market(s) in this project region. If that is not the case and therefore the market share is above 25%, the project has to account for leakage emissions.