Global C-Sink Registry - Description C-Sink Registry

Carbon sinks and their persistence

Carbon sink potentials arise in most cases with the production of associated physical products. An example of this is biochar, which can always be assigned to a production site with GPS coordinates.

At the moment of production, the C-sink potential is calculated and certified by the certification body. The exact localisation of the production is necessary in any case in order to subsequently calculate any further emissions until the final use/application of the products and to deduct them from the first calculated potential.

With the application of the physical materials, here again biochar can be cited as an example, the carbon sink that is still available has a scientifically proven persistence. To stay with the example of biochar, it has been proven on the basis of scientific studies that the C-sink value of biochar decreases slightly over the years and after 100 years still amounts to 74 percent of the original value.

In the C-sink registry, not only double counting of C-sinks must be excluded, but also the management of the physical persistence of C-sinks must be accurately accounted for and presented. With our methods, this is ensured in any case, because the scientific evidence of persistence curves is presented and publicly mapped.

Figure 1: Persistence curve C-sink of biochar over 1000 years

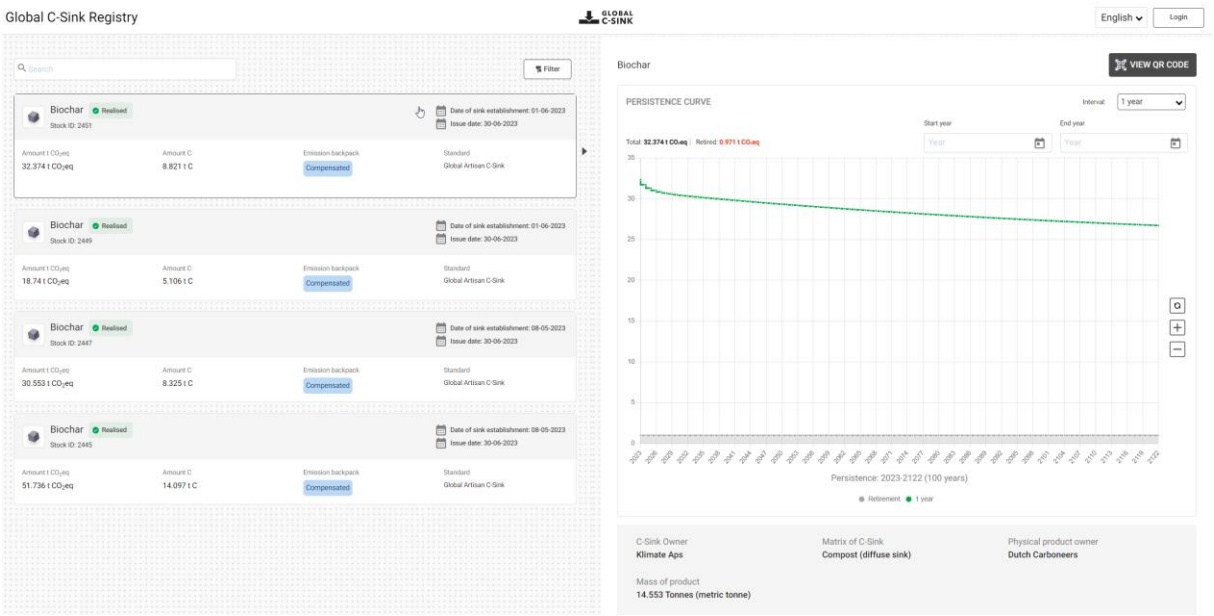
Short-term and long-term C-sinks

Carbon sinks are usually long-term C-sinks that are still physically present and localisable after 100 and even 1000 years. To take the example of biochar again, based on today's scientific assessment, it can be assumed that C-sinks are still present at around 74 percent of the initial value even after 1000 years of soil application. During this time, the finest parts of the biochar are washed out into the subsoil or even enter the oceans, but remain stable in the sink and can be described as long-term C-sinks.

In addition to long-term C-sinks, there are also a number of short-term C-sinks, which can only be precisely measured and certified step by step. A wooden house, for example, represents a typical short-term C-sink, which can and must also be correctly represented in our registry. For example, it is possible that a wooden house would be demolished after 80 years and the wood would be used for thermal recycling. In this case, the certifier would set this C-sink value to zero in the registry at this moment, i.e. the physical C-sink would no longer exist at this point.

Now there are also C-sinks, which only build up over the years and therefore show an ascending persistence curve. In this case, the C-sink increases every year and can be described as long-term due to its persistence. An example of this would be Enhanced Weathering, where rock weathering in the soil only gradually leads to a C-sink.

In Carbon Standards International's C-sink registry, not only will the persistence curves of C-sinks be accurately mapped, but in future short-term C-sinks will also be distinguished from long-term C-sinks. In any case, the owner of a C-sink can continuously check what value his C-sink has in the registry.



https://global-c-registry.org/

The avoidance of double counting and the correct values of C-sinks are ensured at all times with our system. It is probably the most detailed system of traceability and tracking of C-sinks in the C-sink market.