



ClieNFarms
Climate Neutral Farms

ClieNFarms Scaling Toolbox

DORA – Dashboard for Outcomes of Regenerative Agriculture

Monitoring Impact

This tool, developed by the FAO, is useful in measuring multiple the performance and sustainability of multiple aspects of an agroecological system. The tool is designed to be used either directly by farmers or by farming advisers with the data and reports presented in clear and easy-to-understand graphs. AgriCircle acts as advisor/consultant in a joint process with the farmer, to combine the farmer's own insights and traditional knowledge with data and trends to identify changes in the management towards Regenerative Agriculture.

Purpose

The DORA-Tool, short for "Dashboard for Outcomes of Regenerative Agriculture," serves the purpose of providing farmers with precise data on biomass productivity and soil coverage of their fields. By utilizing satellite imagery, the tool enables farmers to make informed decisions on regenerative agriculture practices. The images are run through an algorithm developed by Agri Circle that calculates the Indices and compares them to the surrounding region.

Expected outcomes of applying the tool

Applying the DORA-Tool is expected to result in several positive outcomes:

First insight into current farm management: Together with the farmer's data that reaches back to 2017, it delivers insights into how the management of the farm has been and how this affected productivity and soil cover. From that, a discussion can be started on where the farm is headed and what could be changed in its management.

Understanding the context of the farm: Using a regional comparison enables farmers to see their standing within it and gives them a reasonable basis of comparison, accounting for local conditions and weather events. In the application, the farmers were either pleased to see that what they are doing seems to be working or understood that they have a potential to improve their management.

Business Model changes: with DORA as the foundation and other input during the consulting process, changes to the current business model of the farm can be proposed.

Monitoring Fields and Crops: The tool enables the constant monitoring of the implemented changes and the crop rotation, as it is accessible on AgriCircle's online platform.

Basis for data-driven consulting: Starting with the basic data from DORA the acceptance of further analysis like precision sampling is increased.

Preparation

What needs to be in place for the tool to work properly (ingredients list)

All that is needed is the shape file of the fields that are to be assessed. For this, the farmer can either upload the shape file or draw the field shapes directly on AgriCircle platform. From there, the process of analysing the fields can be triggered directly.

This can also be done by the consultant if the field shape files are available. Combining this with lab reports of soil analysis can offer enhanced insights.

Step-by-step guide to using the tool (Recipe)

Shape files are uploaded to the platform

In the DORA Tab, the analysis can be triggered

The data is assessed by the farmer alone or with the help of a consultant. Here the following process will be made:

Assessment of total farm resilience by comparison with climate data

Single Field performance of every field (productivity, crop rotation, significant events (dips or rises in the data))

Discussion of farm improvements via filling in the RegenAg canvas

How to measure effects

The user can retrigger the DORA assessment any time. However, the aim is to do this at the end of the year, when all the satellite images from the entire year are available. This will show changes in soil coverage and productivity.

Suggested follow up steps (links to other tools)

Following the DORA consulting, further assessments can be made such as precision sampling to assess different soil components (N, P, K, Ca, etc.) or carbon stocks. These can be used to create precision fertilization maps.

Links and references

Please refer to the added Presentation (20230920 - DORA Consulting_EN)

[AgriCircle AG - startup.ch](https://www.agricircle.ch)

