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DIGITAL DECARBONIZATION TOOLS IN AGRICULTURAL FINANCE: THE DECARBFARM CASE STUDY

DECARBFARM CASE STUDY
LATVIAN CREDIT INSTITUTIONS

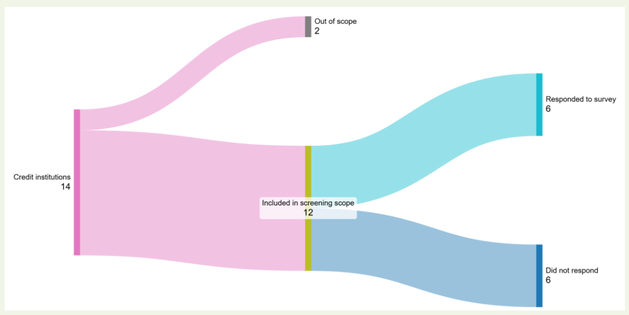
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KEY RESULT

All seven experts had considered a farm GHG calculation tool, while 57% reported that an agricultural ESG tool was missing. Annual GHG calculation and farm-level emissions showed nominally significant increases in expected importance over five years (p = 0.037 each).

STUDY DESIGN



The survey targeted Latvian credit institutions serving the agricultural corporate segment.

14 REGISTERED CREDIT INSTITUTIONS SCREENED

12 INSTITUTIONS IN THE TARGET SCOPE

6 INSTITUTIONS THAT RESPONDED

7 COMPLETE EXPERT RESPONSES

One institution contributed two responses from different departments. The analysis retained both departmental perspectives.

SURVEY CONTENT

13 May to 3 June 2026

Experts rated current importance and expected importance in five years on a five-point Likert scale. They also assessed the usefulness of farm GHG calculation, decarbonisation scenario modelling and biodiversity assessment. Further questions covered tool adoption, missing capabilities and desired functions.

ANALYSIS

DESCRIPTIVE Frequency distributions and modal values for ordinal responses.

CHANGE Wilcoxon signed-rank tests compared current and five-year ratings.

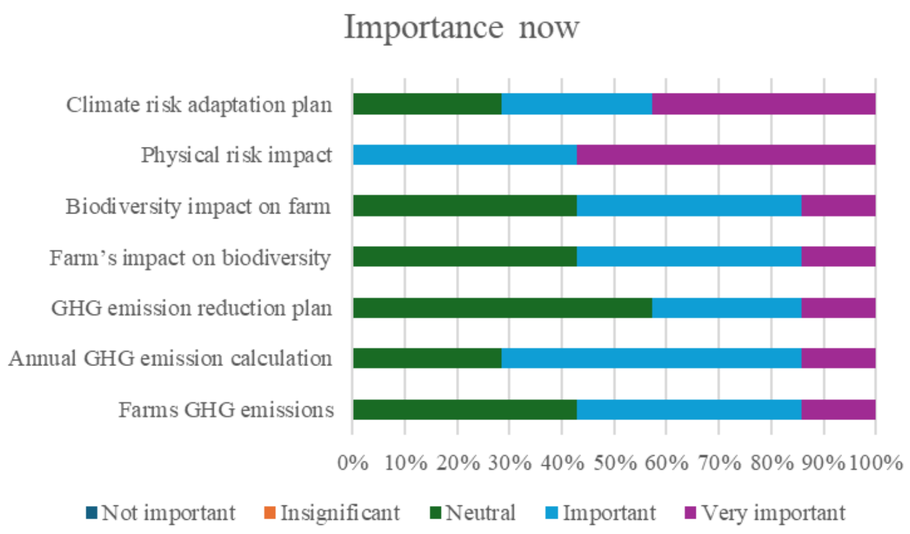
OPEN TEXT One researcher coded recurring themes and the co-authors validated the coding.

EVIDENCE BOUNDARY

The results describe seven expert responses from six institutions. They do not estimate the views of every department or institution. Seven hypothesis tests used no multiple-comparison correction, so the two p = 0.037 results remain nominal and directional.

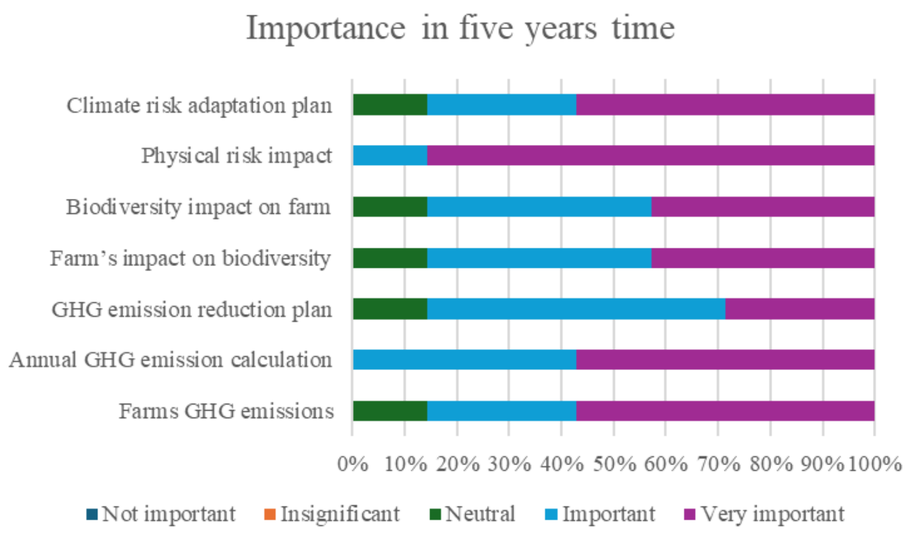
Counts from multiple-choice and open-ended questions can exceed n = 7.

CURRENT ASSESSMENT PRIORITIES



All respondents rated physical risk impact as important or very important. Climate adaptation planning and annual GHG calculation followed.

EXPECTED PRIORITIES IN FIVE YEARS



Six of seven respondents rated physical risk impact as very important. Annual GHG calculation received four very important and three important ratings.

FIVE-YEAR CHANGE

p = 0.037 ANNUAL GHG CALCULATION

Expected importance increased significantly in the unadjusted paired test.

p = 0.037 FARM-LEVEL GHG EMISSIONS

Expected importance increased significantly in the unadjusted paired test.

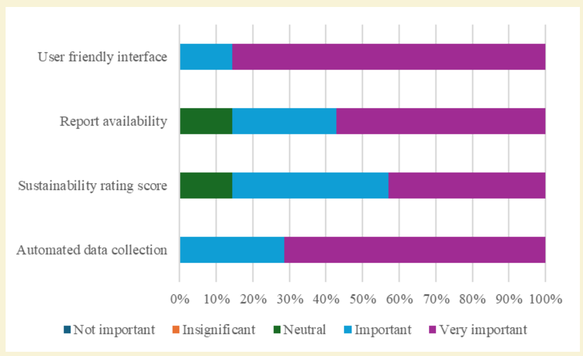
TOOL ADOPTION AND GAP

7 / 7 considered a farm GHG calculation tool

4 / 7 reported an outright missing agricultural ESG tool

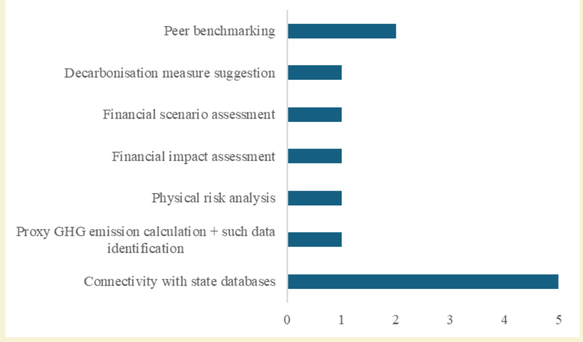
3 / 7 reported that tools were only partly available

FUNCTIONAL PRIORITIES



All seven rated farm biodiversity assessment important or very important. Six rated a user-friendly interface very important, followed by five for automated data collection.

ADDITIONAL REQUESTS



Connectivity with state databases received five mentions. Peer benchmarking received two. Every other item received one mention.

DECARBFARM ALIGNMENT

3 / 11 IDENTIFIED FUNCTIONAL NEEDS ALREADY COVERED

Current scope includes interface usability, report availability and decarbonisation measure suggestions.

EXPANSION TARGETS

Physical climate risk assessment
Financial impact assessment
Connections to state databases

Peer benchmarking does not fit the current architecture because DecarbFarm does not retain an internal database of user data.

INTERPRETATION BOUNDARY

SMALL SAMPLE Seven experts represented six of the twelve eligible institutions.

ONE BANK Two experts from one institution supplied different departmental views.

NOMINAL p The analysis tested seven factors without an adjustment for multiple comparisons.

SCOPE Results support tool development priorities but do not establish national population estimates.

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