

ILUC risk tool – brief introduction

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The tool objective is to help estimate the risk of indirect Land Use Change related to a certain type of crop production or of bio-material production. The risk is an assessment given in ten classes, akin to the energy classes, with A+++ the lowest risk of ILUC, A++, A+ and A still considered low risk, C being the average risk for the category, and D to G classes being considered high risk classes. In this way, it is possible to compare different types of productions and evaluate possible strategies (LIIBs, see Deliverable 7.2) to reduce the risk of ILUC.

Important: the risk given is relative, it can be compared only within a certain crop tool. Since each crop has a dedicated spreadsheet, the comparison between different setup of the same spreadsheet is possible, while the comparison of risk between two different spreadsheet is not on the same scale, and thus is meaningless. It is possible to compare the risk between different crops/spreadsheets, however this requires the interpretation of the increase in demand for land estimates in the sheet “Default Values” (Under the name “BBDemandForLand with erosion”). This option is, hence, reserved to auditors and technicians who read the deliverable 7.2 and have knowledge of the ILUC problematics.

There are 5 sheets in the tool:

- The “Input” sheet is the reference sheet for all users. The input table is divided into three sections, depending on the level of assessment: the crop producer (green), the Intermediate product producer (e.g. hydrolyzate; yellow) and the bio-material producer (light blue). Most of these sections have a default value assigned, so the input is only optional. There are notes in all the inputs to explain what the input is supposed to be. More information is provided in deliverable 7.2. After inserting the input, the spreadsheet will automatically assign a new risk class – this can take a moment, since the calculation is a bit heavy for the spreadsheet. On the right hand side of the sheet, the risk category is provided as a result of the input inserted.
- The “default values” sheet shows how the main variables to calculate the ILUC risk are obtained, and all the default values used. This sheet is reserved to auditors and people with knowledge of ILUC problems. Here it is possible to modify the constants and the defaults in order to update the spreadsheet, or to make it more specific for a defined situation. Unfortunately it is not possible to expand the spreadsheet/tool as it is – this require further calculations from the SydILUC model. The relationship between risk classes and estimates of change in land demand is shown on the right hand side of the sheet; this is useful to compare different crops/spreadsheet between them.
- The “country matrix” sheet includes all the information collected on the relevant ILUC characteristics of each country. This matrix has many blank cells due to missing data – as soon as the data becomes available, or the conditions change, the auditors should update the table.
- The “erosion SOC” sheet includes information for a simple calculation of the effects of erosion and soil degradation on ILUC. The sheet allows the auditors to include the data relevant for the calculation when it is available: change in soil organic carbon, and the five RUSLE factors. As a reference, the auditor could use the maps provided by the JRC for all factors. Even better, the 5 factors can be calculated for the specific site.

- The “Matrix” sheet includes the set of dimensionally reduced simulations of the SydILUC model. It includes only 10000 simulations to avoid problems for the spreadsheet calculation. This sheet is provided to maintain transparency, but should not be modified. The only person who can safely modify this matrix is someone who understand how the SydILUC model, on which the tool is based, works.

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