

**PARALLEL SESSION B : FRONTIER DOWNSCALING TOOL
B3: A FOCUS ON ESD SPECIFIC OPPORTUNITIES**

**Climate change scenarios for low carbon agriculture in Poland based on
EURO-CORDEX (EUR-11) simulations**

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Presented are results of regional climate change assessments in Poland carried out in frame of the NCBR BIOSTRATEG project: Support for the low carbon agriculture able to adapt to climate change today and in the 2030, 2050 time perspectives. The aim of the project is to work out the guidelines for the crop production in Poland in order to improve an efficiency of use of available resources through implementing innovative low carbon agricultural practices under climate change conditions.

For climate change evaluations results of 10 rcms' simulations from the EURO-CORDEX (EUR-11) are applied. Simulations have grid sizes of about 12 km (.11 degree). Considered are two Representative Concentration Pathways RCP4.5 and RCP8.5 describing two possible climate futures. CORDEX simulations are verified for selected regions in Poland, using observations from experimental farms. In order to adjust model outputs to specific regional characteristics and special needs of the users a downscaling post processing is applied. Series of daily projections of climate parameters (temperature, precipitation, humidity, surface radiation) are generated for the 2020-2090 period. Also, a selection of climate indices convenient for agricultural assessments is computed. A detailed analysis of direct and downscaled model results for the experimental farms is provided. Two ensembles of simulations for two RCPs are compared.

A very important issue is an appropriate and understandable presentation of climate change assessments to stakeholders. To illustrate the conclusions of our results various visualizations are proposed.

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