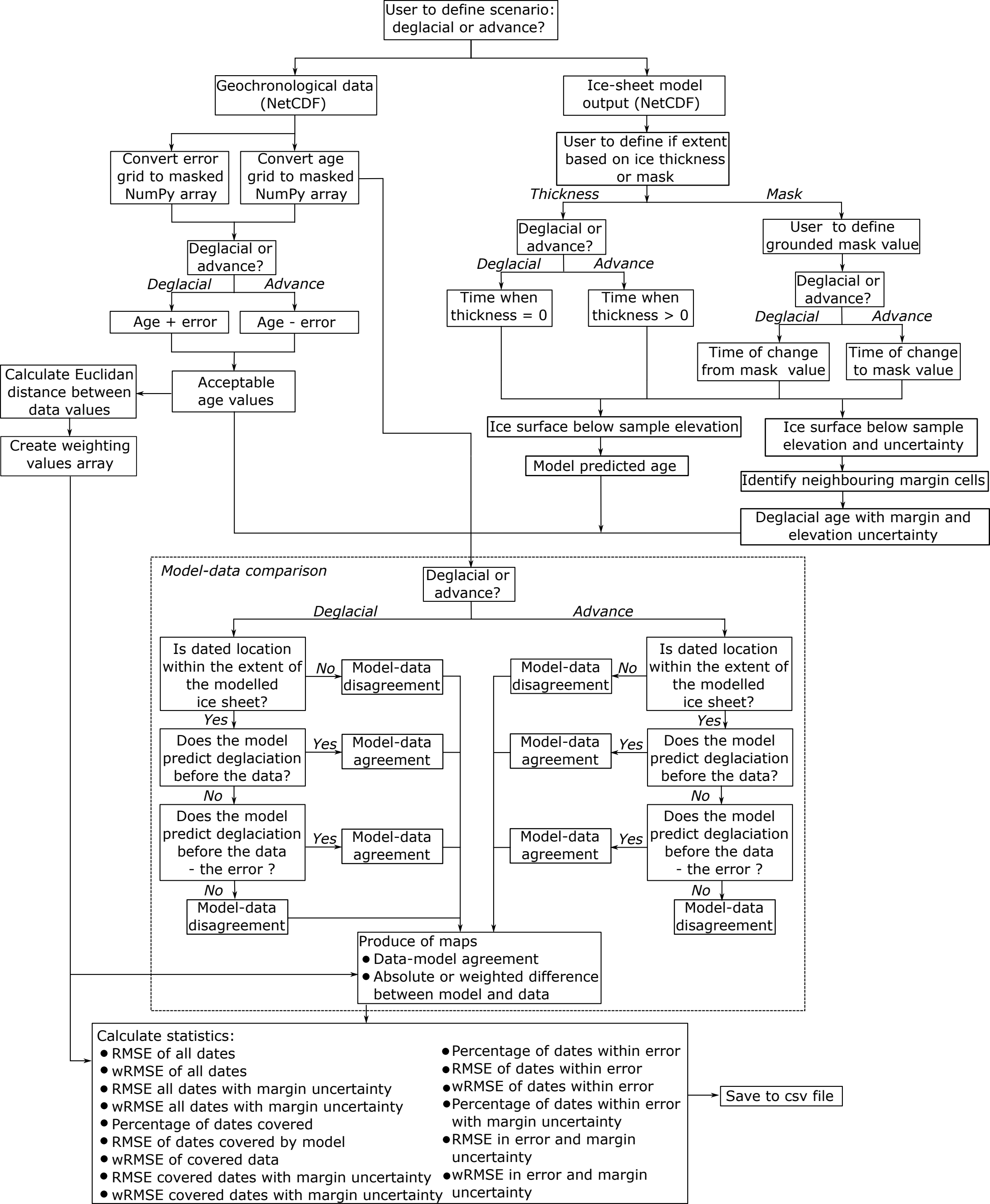
User to define scenario: deglacial or advance?
Geochronological data (NetCDF)
Ice-sheet model output (NetCDF)
Convert error grid to masked NumPy array
Convert age grid to masked NumPy array
User to define if extent based on ice thickness or mask
Thickness
Mask
Deglacial or advance?
Deglacial
Advance
Age + error
Age - error
Deglacial or advance?
Deglacial
Advance
Time when thickness = 0
Time when thickness > 0
User to define grounded mask value
Deglacial or advance?
Deglacial
Advance
Time of change from mask value
Time of change to mask value
Calculate Euclidan distance between data values
Acceptable age values
Create weighting values array
Ice surface below sample elevation
Model predicted age
Ice surface below sample elevation and uncertainty
Identify neighbouring margin cells
Deglacial age with margin and elevation uncertainty
Model-data comparison
Deglacial or advance?
Deglacial
Advance
Is dated location within the extent of the modelled ice sheet?
No
Model-data disagreement
Yes
Does the model predict deglaciation before the data?
Yes
Model-data agreement
No
Does the model predict deglaciation before the data - the error ?
Yes
Model-data agreement
No
Model-data disagreement
Model-data disagreement
No
Is dated location within the extent of the modelled ice sheet?
Yes
Model-data agreement
Yes
Does the model predict deglaciation before the data?
No
Model-data agreement
Yes
Does the model predict deglaciation before the data - the error ?
No
Model-data disagreement
Produce of maps
• Data-model agreement
• Absolute or weighted difference between model and data
Calculate statistics:
• RMSE of all dates
• wRMSE of all dates
• RMSE all dates with margin uncertainty
• wRMSE all dates with margin uncertainty
• Percentage of dates covered
• RMSE of dates covered by model
• wRMSE of covered data
• RMSE covered dates with margin uncertainty
• wRMSE covered dates with margin uncertainty
• Percentage of dates within error
• RMSE of dates within error
• wRMSE of dates within error
• Percentage of dates within error with margin uncertainty
• RMSE in error and margin uncertainty
• wRMSE in error and margin uncertainty
Save to csv file