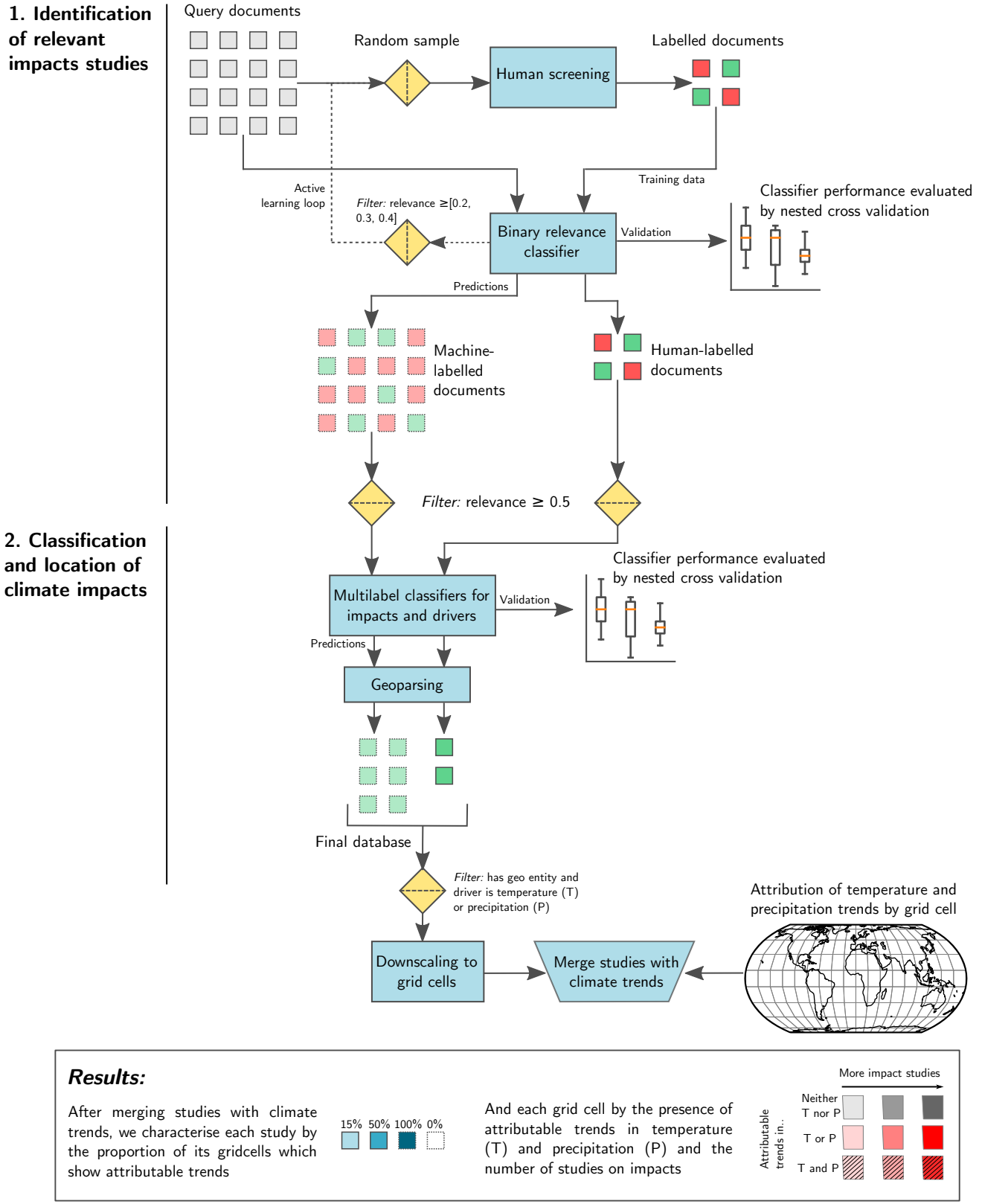
1. Identification of relevant impacts studies
Query documents
Random sample
Human screening
Labelled documents
Active learning loop
Filter: relevance ≥[0.2, 0.3, 0.4]
Training data
Binary relevance classifier
Validation
Classifier performance evaluated by nested cross validation
Predictions
Machine-labelled documents
Human-labelled documents
Filter: relevance ≥ 0.5
2. Classification and location of climate impacts
Multilabel classifiers for impacts and drivers
Validation
Classifier performance evaluated by nested cross validation
Predictions
Geoparsing
Final database
Filter: has geo entity and driver is temperature (T) or precipitation (P)
Attribution of temperature and precipitation trends by grid cell
Downscaling to grid cells
Merge studies with climate trends
Results:
After merging studies with climate trends, we characterise each study by the proportion of its gridcells which show attributable trends
15% 50% 100% 0%
And each grid cell by the presence of attributable trends in temperature (T) and precipitation (P) and the number of studies on impacts
More impact studies
Attributable trends in..
Neither T nor P
T or P
T and P