**ESA 2020 Abstract Submission**

**Authors:** Martin Westgate & Peggy Newman [& others?]

**Title:** Improving the Atlas of Living Australia for ecological researchers

**Abstract**

The Atlas of Living Australia (ALA) provides free access to 90 million biodiversity records, making it an unparalleled resource for ecological research. However, providing data on this scale generates challenges in how best to support the needs of the research community. Here we use text mining and user download data to quantify research fields that are most effectively supported by the ALA, and to identify potential gaps. A high proportion of research citing the ALA focusses on biodiversity informatics, science communication, and taxonomic or functional research on plant and animal taxa. The most common topic among articles citing the ALA was species distribution modelling (SDM), and papers on this topic also had higher-than-average dependence on data sourced from the ALA as a core component of their research. Supporting improved SDM research in future will require substantial improvements in data quality, partly through current initiatives such as data filtering and annotation, but ideally also via new statistical tools or feedback mechanisms that iteratively improve the reliability of the underlying records. Moving beyond SDMs to increase the range of research questions that ALA users can answer will require closer ties to the ecological research community. Options for future work could include: improved integration of observations from ecological research; storage and processing of data-rich information sources such as eDNA, genomics, camera trap or audio recorders; and supporting cleaner workflows via improvements to end user support, such as the ‘ALA4R’ R package.

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**Author Biography**

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