

**GIS-BASED CLASSIFICATION, MAPPING AND VALUATION
OF ECOSYSTEM SERVICES IN PRODUCTION LANDSCAPES:
A CASE STUDY OF THE GREEN TRIANGLE REGION
OF SOUTH-EASTERN AUSTRALIA**

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ABSTRACT

This paper presents a GIS-based approach for classification, mapping and valuation of selected ecosystem services using market and non-market valuation techniques. First, we identified and compiled a variety of spatial and non-spatial data and developed a land cover typology of the study area into a GIS environment. Second, we estimate the annual flow of economic value of each service using various economic valuation techniques. We found that the economic value of market ecosystem services such as timber and carbon was relatively straightforward. However the quantification and valuation of non-market services such as biodiversity was complicated. Finally, we produced an annual flow of total economic value of sub-catchment G8 of the Lower Glenelg Basin, south-eastern Australia using the spatial economic valuation technique. We expect that this work will highlight research avenues to advance the ecosystem services framework as an operational basis in plantation dominant production landscapes in Australia and elsewhere.

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