Appendix 1 Structured literature review methods

A structured literature review was conducted to examine how landscape approaches are discussed in the literature, specifically focusing on conceptual frameworks and explicitly defined landscape approaches. Three main search terms were used in the Web of Science and Google Scholar search sites to identify articles selecting only articles providing some form of landscape-scale approach for resource management, which included both human and natural systems (Figure 2). The fourth set of search terms was only queried in Web of Science, as Google Scholar didn’t provide very relevant results.

A range of different complications of search terms were preliminarily tested before coming up with the final set of three which were found to provide the most relevant results. Some sets of terms initially tested included: whole AND landscape* AND approach; integrated AND landscape* AND management; “landscape mosaic” AND livelihood*; “landscape mosaics” AND livelihood*; “landscape approach” AND livelihood* AND “case study”; ecosystem* service* approach*.

Google Scholar and Web of Science were chosen as the two search sites after reviewing a range of relevant search databases including: AGRICOLA, CAB Direct, FAO, Academic Search Complete, BIOSIS preview, AgEcon Search, Environmental Sciences and Pollution Management, Social Sciences in Forestry. Web of Science returned more specific results drawing from high impact, cross-disciplinary, international research complemented by Google Scholar providing a much broader inventory of research to ensure any important relevant articles were not missed. The first one hundred hits, sorted by relevance, for each set of search terms were reviewed. Articles were initially screened based upon their title and abstract (first selection), and then further screened based upon content in the text (second selection) (Figure A1.1).

Originally three categories of articles were screened for. This included: 1) landscape approaches or analyses which provided some level of insight into taking a landscape-scaled approach including lessons learned from management activities or a set of suggested key principles; 2) conceptual frameworks for landscape-scale approaches addressing some aspect of resource management; and 3) case studies of resource management activities implemented at a landscape scale. The last category was dropped from the study design before analysis of the articles as it was originally included for a separate analysis that was determined beyond the scope of the study after obtaining search results. Additionally a limited number of papers that identified areas for further research or research priorities related to landscape-scale resource management were included as deemed highly relevant. A total of 23 articles were selected from the literature review to be included in the analysis. After all 23 articles were read in detail other relevant citations were noted and these articles were also reviewed. 20 additional papers were added to the analysis using this snowballing method resulting in a total of 43 articles (Figure A1.1).
Figure A1.1 Diagram of the article selection process with the four sets of search terms, the number of hits returned from the two search sites and the number of articles selected at each stage of the process. The second and third sets of search terms contain the word ‘livelihood’, chosen to help find articles that included human systems as stipulated in the inclusion criteria.

The papers included in the review each provided a set of guidelines, principles or recommendations. These were developed for four different overarching objectives: to inform and further develop landscape research (e.g., Wu and Hobbs 2002, Chazdon et al. 2009, Pfund 2010, Pijanowski et al. 2010), to improve landscape-scale planning processes (e.g., Klug 2012, Gomez-Sal et al. 2003, Pressy and Bottrill 2009, Pearson and Gorman 2010), to guide landscape management (e.g., Wyborn 2009, Duff et al. 2009, Frost et al. 2006, Fischer et al. 2006) and to provide an alternative conceptual design of a landscape (e.g., Field et al. 2003, Terkenli 2001, Musacchio 2009a, Naveh 2001).

Different categories of information extracted from the papers, such as the definition/interpretation of landscape, were examined individually and then compared across papers to identify convergences and divergences between them. The top six cross-cutting concepts identified are as follows: 1) complexity, 2) interdisciplinarity or transdisciplinarity, 3) sustainability, 4) participation, 5) tradeoffs and 6) holism. As the selection and analysis work was completed solely by the first author there may have been both selection and observation bias present in this process. Furthermore the total of 43 articles is a limited sample size compared to the number of articles that exist relating to landscapes and landscape approaches. This set of 43 articles therefore represents a select set of articles with an emphasis on conceptual frameworks and guidelines for taking a landscape approach in complex social-ecological systems.
Articles included in the review:


