Appendix 1

Worksheet to elicit objective weights. Twenty owners of large, forested properties (at least 20 ha in total area with at least 4 ha of forest) in Macon County, North Carolina, participated in a structured decision making (SDM) process consisting of two series of workshops with ten landowners each. In each series, landowners evaluated what they can do to their forest to maximize the achievement of their land use objectives. After landowners identified their objectives, they assigned weights to their objectives. Larger weights indicated greater importance. The landowners in an SDM series shared common objectives, but each landowner assigned their own weights to the objectives. The weights were elicited using this worksheet.

Instructions:

- Rank scenarios from 1 = best to last = worst
- Give each scenario a grade between 100 and 0
- The grade reflects how satisfied you would be with that outcome, where 100 = completely satisfied
- Make sure your grades reflect your ranking
    - Scenario ranked 1 has highest grade,
    - Scenario ranked 2 has second highest grade, …

	Native species diversity	Exotic species abundance	Water quality	Rank	Grade
Worst	Large decrease in native species diversity	Large increase in exotic species abundance	Large decrease in water quality	4	0
Water scenario	Large decrease in native species diversity	Large increase in exotic species abundance	Large increase in water quality		
Native scenario	Large increase in native species diversity	Large increase in exotic species abundance	Large decrease in water quality		
Exotic scenario	Large decrease in native species diversity	Large decrease in exotic species abundance	Large decrease in water quality		

	Human safety	Property safety	Rank	Grade
Worst	Low safety	High level of damage	3	0
Property scenario	Low safety	No damage		
Human scenario	High safety	High level of damage		

	Rural livelihood	Rural landscape	In the family	Development	Rank	Grade
Worst	33-0% of income from the property	Lose a lot	33-0% of property in the family	More than two divisions	5	0
Livelihood scenario	100-67% of income from the property	Lose a lot	33-0% of property in the family	More than two divisions		
Landscape scenario	33-0% of income from the property	Maintain	33-0% of property in the family	More than two divisions		
Family scenario	33-0% of income from the property	Lose a lot	100-67% of property in the family	More than two divisions		
Development scenario	33-0% of income from the property	Lose a lot	33-0% of property in the family	No divisions		

	Safety	Net income	Heritage	Aesthetics	Forest health	Rank	Grade
Worst	Low human safety & High level of property damage	Negative	Lose a lot of rural landscape, 33-0% of income from the property, 33-0% of property in the family, More than two divisions	Bad	Low native species diversity, High exotic species abundance, Low water quality	6	0
Safety scenario	High human safety & No property damage	Negative	Lose a lot of rural landscape, 33-0% of income from the property, 33-0% of property in the family, More than two divisions	Bad	Low native species diversity, High exotic species abundance, Low water quality		
Net income scenario	Low human safety & High level of property damage	Positive	Lose a lot of rural landscape, 33-0% of income from the property, 33-0% of property in the family, More than two divisions	Bad	Low native species diversity, High exotic species abundance, Low water quality		
Heritage scenario	Low human safety & High level of property damage	Negative	Maintain rural landscape, 100-67% of income from the property, 100-67% of property in the family, No divisions	Bad	Low native species diversity, High exotic species abundance, Low water quality		

Forest scenario	Low human safety & High level of property damage	Negative	Lose a lot of rural landscape, 33-0% of income from the property, 33-0% of property in the family, More than two divisions	Bad	High native species diversity, Low exotic species abundance, High water quality
Aesthetics scenario	Low human safety & High level of property damage	Negative	Lose a lot of rural landscape, 33-0% of income from the property, 33-0% of property in the family, More than two divisions	Good	Low native species diversity, High exotic species abundance, Low water quality

Example of how ranks and grades were used to calculate objective weights.
Given these example ranks and grades, the objective of maximize water quality had a weight of 0.42, the objective of maximize native species diversity had a weight of 0.37, and the objective of minimize exotic species abundance had a weight of 0.21.

	Native species diversity	Exotic species abundance	Water quality	Rank	Grade	Objective weight
Worst	Large decrease in native species diversity	Large increase in exotic species abundance	Large decrease in water quality	4	0	=0/(80+70+40) = 0
Water scenario	Large decrease in native species diversity	Large increase in exotic species abundance	Large increase in water quality	1	80	=80/(80+70+40) = 0.42
Native scenario	Large increase in native species diversity	Large increase in exotic species abundance	Large decrease in water quality	2	70	=70/(80+70+40) = 0.37
Exotic scenario	Large decrease in native species diversity	Large decrease in exotic species abundance	Large decrease in water quality	3	40	=40/(80+70+40) = 0.21