

Forest Management and Biodiversity

**Project A-3, Sponsored by the
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Return completed questionnaire to:

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[This survey can also be completed at: http://surveys.bus.oregonstate.edu/BsgSurvey2_0/main.aspx?SurveyID=361]

5a. Do the following considerations encourage or discourage your business or organization in addressing forest biodiversity issues? Please use the following scale:

VE=Very Encouraging, **E**=Encouraging, **N**=Neither Encouraging nor Discouraging, **D**=Discouraging, **VD**=Very Discouraging

	VE	E	N	D	VD
a. Legislative, legal, or regulatory compliance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Current forest conditions (e.g., overstocking, disease outbreak)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Forest type (e.g., mixed hardwood/conifer, pine plantation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Organizational capabilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Financial viability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Forest certification guidelines.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Scientific information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Pressure by special interest groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Public support.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Advisory groups.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Stewardship ethic/company mission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Attaining a market advantage.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Best Management Practices (BMP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5b. Which is the most ENCOURAGING? (enter only one letter) _____

5c. Which is the most DISCOURAGING? (enter only one letter) _____

6a. How important are the following guidelines, regulations, or laws to your business' or organization's approach in addressing issues of forest biodiversity? Please use the following scale where:

VI=Very Important, **I**=Important, **NI**=Neither Important nor Unimportant, **U**=Unimportant, **VU**=Very Unimportant

	VI	I	NI	U	VU
a. Endangered Species Act	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. National Environmental Policy Act (NEPA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Montreal Criteria and Indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Land use regulations/zoning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Certification guidelines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. State forest management regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Organizational plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Best Management Practices (BMP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6b. Which is the most important? (enter only one letter) _____

7a. There are many approaches for addressing forest biodiversity issues. Which of the following approaches does your business or organization use? You will be asked which is the most important.

	YES	NO
a. Attaining pre-European settlement conditions	<input type="checkbox"/>	<input type="checkbox"/>
b. Sustaining timber yields	<input type="checkbox"/>	<input type="checkbox"/>
c. Promoting genetic diversity	<input type="checkbox"/>	<input type="checkbox"/>
d. Attaining a market advantage	<input type="checkbox"/>	<input type="checkbox"/>
e. Promoting landscape diversity	<input type="checkbox"/>	<input type="checkbox"/>
f. Adaptive management	<input type="checkbox"/>	<input type="checkbox"/>
g. Economic diversification.....	<input type="checkbox"/>	<input type="checkbox"/>
h. Organizational mission.....	<input type="checkbox"/>	<input type="checkbox"/>
i. Presence of threatened and endangered species.....	<input type="checkbox"/>	<input type="checkbox"/>
j. Promoting restoration of environmental conditions	<input type="checkbox"/>	<input type="checkbox"/>
k. Ecological diversification	<input type="checkbox"/>	<input type="checkbox"/>
l. Regulatory mandates	<input type="checkbox"/>	<input type="checkbox"/>
m. Other _____	<input type="checkbox"/>	<input type="checkbox"/>

7b. Of the approaches your business or organization uses to develop forest biodiversity management, which is the most important? (enter only one letter) _____.

Studying plants, animals, and even nonliving things around us such as soil and water gives us clues about the general condition of the environment. These environmental characteristics are called *indicators* because they can be measured to indicate past, present, and future conditions. Several of the remaining questions ask what kinds of indicators your business or organization uses to assess and manage forest biodiversity.

8a. Please indicate whether your business or organization is **currently using** or **plans to use** the following indicators of forest biodiversity. You will be asked which is the most important.

	Now Using		Plan on Using	
	YES	NO	YES	NO
a. Composition of tree species.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Animal species mix	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. All species richness.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Presence of threatened and endangered species.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Species abundance.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Extirpation of one or more animal/plant species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Forest age class distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Crown closure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Tree growth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Age-class distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Dead and down woody debris	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Snags	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Presence/absence of exotic species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Vertical forest structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. Horizontal forest structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p. Special areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q. Old trees.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
r. Protected forest areas.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
s. Stream protection/water quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
t. Habitat representation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
u. Other (please specify): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8b. Among the indicators that you identified above, which one is the most important? (enter only one letter) _____

Questions 9 & 10 Landowners and land managers can manage forest biodiversity conservation at different scales, from individual forest stands to landscape scales that cover several small or large watershed basins spanning one or more counties or even several states. In answering the next two questions, please consider **STAND-LEVEL** and **LANDSCAPE-LEVEL** indicators as separate but related scales of operation.

9a. How important are the following **STAND-LEVEL INDICATORS** to your business' or organization's approach in addressing forest biodiversity issues? Please use the following scale where:

VI=Very Important, **I**=Important, **NI**=Neither Important nor Unimportant, **U**=Unimportant, **VU**=Very Unimportant

	VI	I	NI	U	VU
a. Habitat diversity.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Tree age class distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Crown closure.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Vertical structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Understory development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Mix of age and structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Soil (e.g., structure, minimize compaction)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Hydrology (e.g., soil water-holding capacity, water quality)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Woody debris.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Snags	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Stand openings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Meets social or spiritual needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Riparian buffers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Presence of roads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. Presence of endangered and threatened species.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p. Presence of exotic species.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q. Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9b. Which is the most important? (enter only one letter): _____

10a. How important are the following **LANDSCAPE-LEVEL INDICATORS** to your business' or organization's approach in addressing forest biodiversity issues? Please use the following scale where:

VI=Very Important, **I**=Important, **NI**=Neither Important nor Unimportant, **U**=Unimportant, **VU**=Very Unimportant

	VI	I	NI	U	VU
a. Distribution of habitat types	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Forest age class distribution.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Representation of ecoregional vegetative types.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Interspersion of ecological land units	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Representation of successional stages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Mix of forest structures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Proximity to development (e.g., farms, houses, commercial strips)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Hydrology (e.g., streams, stream flow, water quality)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Habitat connectivity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Meeting social and spiritual needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Extent and connectivity of riparian buffers.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Habitat fragmentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Extent of road network	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Distribution of endangered and threatened species.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. Distribution of exotic species.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p. Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10b. Which is the most important? (enter only one letter): _____

11a. There are many tools available to assess the biodiversity of forests. For each of the following, please indicate whether these tools are useful to your business or organization in addressing forest biodiversity.

	Useful	Not Useful	Not Used
a. Timber inventory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Forest Inventory and Analysis (FIA) data.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Understory inventory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Non-timber Forest Products (NTFP) inventory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Wildlife inventory.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Water quality/quantity assessments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Measures of soil integrity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Geographic Information Systems (GIS) or remote sensing ..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Computer models and simulations.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Compliance with regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Level of profitability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Outside funding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Third-party (independent) certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Montreal Criteria and Indicators.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. Plant or animal species monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p. Pollution monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q. Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11b. Among the tools that you identified above, which is the most useful? (enter only one letter) _____

Questions 12 through 15 These questions focus on the **EFFECTIVENESS AND SUCCESS** of your business' or organization's approach in addressing forest management and biodiversity issues.

Measuring the effectiveness and success of forest biodiversity conservation is no easy task, especially if ongoing efforts are relatively new or recently implemented. For the remaining questions, consider how forest biodiversity conservation on your lands has changed over time and identify those factors that have directed or still influence forest biodiversity management practices implemented on the ground. Please check the response that best describes your answer.

12. How frequently does your business or organization use each of the following methods to assess the effectiveness of its management strategy for forest biodiversity?

	Always	Frequently	Infrequently	Never
a. Timber inventory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Forest Inventory and Analysis (FIA) data.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Non-timber Forest Products inventory (NTFP).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Wildlife inventory.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Gap Analysis Program (GAP).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Bioregional assessment.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Watershed assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Cumulative impact analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Water quality analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Soil integrity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Geographic Information Systems (GIS) or remote sensing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Computer simulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Third-party (independent) certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Montreal Criteria and Indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. Advisory groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p. Other: _____ ..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13a. How useful are the following indicators to your business or organization in managing for species diversity?

	Useful	Not Useful
a. Species abundance	<input type="checkbox"/>	<input type="checkbox"/>
b. Species density.....	<input type="checkbox"/>	<input type="checkbox"/>
c. Population distribution.....	<input type="checkbox"/>	<input type="checkbox"/>
d. Genetic diversity	<input type="checkbox"/>	<input type="checkbox"/>
e. Threatened or endangered species	<input type="checkbox"/>	<input type="checkbox"/>
f. Forest dependent species.....	<input type="checkbox"/>	<input type="checkbox"/>
g. Particular groups of species.....	<input type="checkbox"/>	<input type="checkbox"/>
h. Exotic species	<input type="checkbox"/>	<input type="checkbox"/>
i. Habitat diversity.....	<input type="checkbox"/>	<input type="checkbox"/>
j. Extirpated species.....	<input type="checkbox"/>	<input type="checkbox"/>
k. Other: _____ ..	<input type="checkbox"/>	<input type="checkbox"/>

13b. Among the indicators of species diversity that you identified as being **Useful**, which is the most useful (enter only one letter) _____

14. On a scale of 1 to 9 (where 1 is **Not at All** and 9 is **Completely Implemented**), to what degree is your business' or organization's approach in addressing forest biodiversity issues being implemented?
Please circle the appropriate number:

Not at All

1 2 3 4 5 6 7 8 9

**Completely
Implemented**

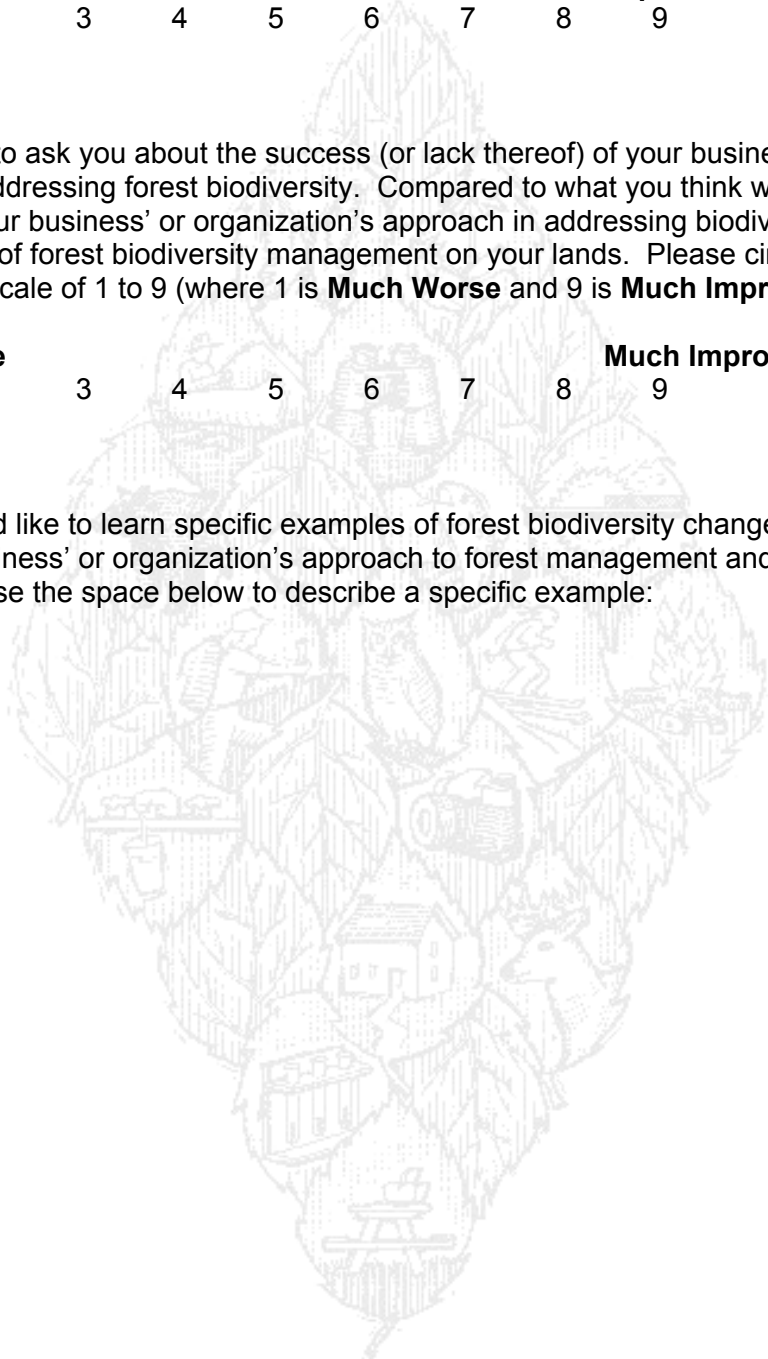
15a. We now wish to ask you about the success (or lack thereof) of your business' or organization's approach in addressing forest biodiversity. Compared to what you think would have happened in the absence of your business' or organization's approach in addressing biodiversity, please indicate the current status of forest biodiversity management on your lands. Please circle the appropriate number on a scale of 1 to 9 (where 1 is **Much Worse** and 9 is **Much Improved**):

Much worse

1 2 3 4 5 6 7 8 9

Much Improved

15b. We would like to learn specific examples of forest biodiversity changes occurring as a result of your business' or organization's approach to forest management and biodiversity. If you like, please use the space below to describe a specific example:



*You have now completed the survey. **THANK YOU** for your time and effort! If you would like to make any additional comments, please use the blank space on the back of this survey.*