

Supplementary Data 4. The nesting structure of response categories. Note that this includes response categories for which we did not have sufficient sample size (see Supplementary Data 3).

Coarse Response	Finer Responses
-----------------	-----------------

Vertebrates	
-------------	--

Vertebrate Diversity	Bird Diversity, Fish Diversity, Herpetofauna Diversity, Mammal Diversity, Small Mammal Diversity
----------------------	--

Vertebrate Abundance	Bird Abundance, Mammal Abundance, Fish Abundance, Herpetofauna Abundance, Herpetofauna Diversity, Mesocarnivore Abundance, Ungulate Abundance, Small Mammal Abundance
----------------------	---

Invertebrates	
---------------	--

Invertebrate Diversity	Pollinator Diversity, Invert Herbivore Diversity, Invert Predator Diversity, Pollinator Abundance
------------------------	---

Invertebrate Abundance	Pollinator Abundance, Invert Herbivore Abundance, Invert Detritivore Abundance, Invert Predator Abundance, Invert DiseasePathogen Abundance, Bivalve Abundance, Invert Omnivore Abundance, Invert Herbivore Diversity
------------------------	---

Ecosystem	
-----------	--

Ecosystem Respiration	CO2 Respiration
-----------------------	-----------------

Net Ecosystem Exchange	CH4 Exchange, CO2 Exchange
------------------------	----------------------------

Total Carbon	
--------------	--

Denitrification Rate	
----------------------	--

Total Biomass	
---------------	--

Fire Severity	
---------------	--

Nitrification Rate	
--------------------	--

N Mineralization Rate	
-----------------------	--

Dead Vegetation	
-----------------	--

Soil	
------	--

Ammonification Rate	
---------------------	--

PO4 Mineralization Rate	
-------------------------	--

Soil N:Ca	
-----------	--

Soil N:P	
----------	--

Soil P:Ca	
-----------	--

Soil Recalcitrant C	
---------------------	--

Denitrification Rate	
----------------------	--

Soil AI	
---------	--

Soil B	
--------	--

Supplementary Data 4. The nesting structure of response categories. Note that this includes response categories for which we did not have sufficient sample size (see Supplementary Data 3).

Coarse Response	Finer Responses
Soil redox	
Soil salinity	
Soil Cu	
Soil Fe	
Soil Mn	
Soil Zn	
Nitrification Rate	
Soil S	
Soil Conductivity	
Soil Infiltration Rate	
Soil Temperature	
Soil Decomposition Rate	
Soil Total Na	
Cation Exchange Capacity	
Root Biomass	
N Mineralization Rate	
Soil K	Soil Exchangeable K
Soil Labile P	
Soil C:N	
Soil Respiration	CO2 Respiration, Methane Respiration
Soil Compaction	
Soil Mg	
Soil Organic C	
Soil Total Ca	
Soil Organic Matter	
Soil Labile N	
Soil pH	
Soil Moisture	
Soil Total P	

Supplementary Data 4. The nesting structure of response categories. Note that this includes response categories for which we did not have sufficient sample size (see Supplementary Data 3).	
Coarse Response	Finer Responses
Soil Total C	
Bare Ground	
Dead Vegetation	Litter Cover
Soil Total N	
Microbes	
Fungi Diversity	
Microbial Diversity	Archaea Diversity
Fungi Abundance	
Microbe Abundance	
Plant_Nutrients	
Plant Cu	
Plant Fe	
Plant K	
Plant Mn	
Plant N:Ca	
Plant Na	
Plant P:Ca	
Plant S	
Plant Zn	
Plant C:P	
Plant Ca	
Plant Mg	
Plant N:P	
Plant C:N	
Plant C	
Plant P	
Plant N	