

NRLU QUESTION BANK

Monitoring and Post Questions for Short-term Outcomes and

Follow-up Questions for Medium- and Long-term Outcomes

What can we learn from outcomes?

It is essential to examine reported outcomes from different evaluation perspectives:

- Outcome Indicators - The most obvious is “# of participants who learned about XYZ.” This indicator shows the outcome of our program- participants learned something.
- Program-specific topics – Asking questions about specific topics helps us understand what participants learned, showing how effective our program was.
 - Looking at what topics have the highest rating by participants, we see new information or which topics were most of most interest.
 - However, these responses can also be flipped as we focus on what was rated the lowest to see which topics were least understood or not of interest.
- Looking at the data from these perspectives may lead us to review our program/curriculum with these questions:
 - Are we presenting the topic in a way that facilitates learning?
 - Is this a topic that is important or of interest to our participants?
 - Is this a topic that most of our participants already know a great deal about? Might we need to remove it, revise it, or do something else?

By reviewing our collected evaluation data for outcomes and program effectiveness, we can reduce the number of questions asked to avoid survey fatigue by respondents, resulting in lower quality data.

Using this Guide

On the following pages are tables for evaluating NRLU outcomes – short-, medium-, and long-term. Table columns show the logic model and DM outcome indicators, evaluation questions with response options, how to measure collected responses, and examples for writing those results in an impact statement. The NRLU logic model is shown at the end of this document.

NRLU Logic Model Outcomes and Corresponding Evaluation Questions and Responses

NRLU - PROVIDERS OF NATURAL RESOURCES INFORMATION AND ADVICE (NATURAL RESOURCES ADVISORS, EXTENSION EDUCATORS)			
Outcome Indicators in Logic Model & DM	Evaluation Question and Responses	Responses to Report in DM	Examples of Using this Information for Writing Impact
SHORT-TERM - Increased Awareness and Education			
NRLU1.1 # of providers of natural resources information and advice who demonstrate knowledge gain regarding application of current science	[POST] Indicate your level of knowledge of these issues: Before and After insert issues a. None b. A little c. Some d. A lot	Total # = # of participants indicating an increase from before to after (only count each participant once)	Some # participants increased their knowledge of current science for natural resources, including _____, _____, and _____.
NRLU1.2 # of providers of natural resources information and advice who demonstrate new or improved skills to apply science-based information to job	[POST] As a result of attending [program], did you learn new or improve existing skills for applying science-based information in your work? a. Yes, I learned new skills b. Yes, I improved existing skills c. No d. Not sure	Total # = # of participants indicating "Yes" new or improved skills were learned	A total of # (%) participants learned new or improved existing skills for applying science-based information in their work.
NRLU 1.3 # of providers of natural resources information and advice who aspire to submit CEUs to maintain their professional certification or license	[POST] Do you hold or are you planning to obtain a professional certification or license that requires on-going education (CEUs) to maintain? a. Yes, I hold a professional certification/license b. Yes, I am planning to obtain a professional certification/license c. Maybe d. No	Total # = # of participants indicating "Yes" to holding or obtaining a professional certification/license	There are # [Program] participants who hold a professional certification/license (##.##%) or plan to obtain a professional certification/license (##.##%) requiring on-going education (CEUs) to maintain.
NRLU 1.4 # of providers of natural resources information and advice who demonstrate knowledge gain regarding data services, tools and	[POST] As a result of attending [program], did you learn about data services, tools, and/or resources pertaining to natural resources and environment? a. Yes	Total # = # of participants indicating "Yes"	As a result of attending [program], # (%) participants learned about data services, tools, and/or resources pertaining to natural resources and environment.

resources pertaining to natural resources and environment	b. No c. Not sure		
MEDIUM-TERM – Changes in Behavior			
NRLU1 6.1 # of providers of natural resources information and advice who adopt a new practice or change/modify an existing practice in job	[FOLLOW] As a result of attending [program], did you adopt a new practice or change / modify an existing practice in your work? a. Yes, I adopted a new practice b. Yes, I changed/modified an existing practice c. No If Yes, what was that new/modified practice?	Total # = # of participants indicating “Yes” adopted new or changed/modified existing practice Sort responses to “what was that new/modified practice” into common groups/themes.	A total of # (%) providers of natural resources information adopted a new practice, and # (%) changed/modified an existing practice, for their work. Most common adopted practices were _____, _____, and _____.
NRLU1 6.2 # of providers of natural resources information and advice who submit CEUs to professional society	[FOLLOW] Have you submitted on-going education efforts (CEUs) to maintain a current professional certification or license? a. Yes b. Not yet, but I plan to c. No	Total # = # of participants indicating “Yes”	There were # (%) providers of natural resources information who have submitted CEUs to maintain current professional certification/license.
NRLU1 6.3 # of providers of natural resources information and advice who use new knowledge/skill to modify consultations and recommendations related to natural resource concerns	[FOLLOW] As a result of attending [program], did you learn new knowledge/skills that modified your consultations and recommendations related to natural resource concerns? a. Yes b. No If yes, how did you modify your consultations and recommendations?	Total # = # of participants indicating “Yes” Sort responses to “how did you” into common groups/themes.	Some # (%) providers of natural resources information modified their consultations and recommendations. Their consultations and recommendations were modified in these ways, _____, _____, and _____.
LONG-TERM – Impact on Community and System			
NRLU1 11.1 # of providers of natural resources information and advice who report improved job performance	[FOLLOW] Did your job performance improve due to attending [program]? a. Yes b. No If yes, in what ways did your job performance improve?	Total # = # of participants indicating “Yes” Sort responses to “in what ways” into common groups/themes.	There were # (%) providers of natural resources information who improved their job performance due to attending the [program]. Their job performance improved in these ways _____, _____, and _____.
NRLU1 11.2 # of providers of natural resources information and advice who benefit from maintaining professional certification or license (e.g., improved pay, more job opportunities)	[FOLLOW] Have you benefitted (e.g., pay increase, more opportunities, etc.) from maintaining professional certification or licensure? a. Yes b. No If yes, in what ways have you benefitted?	Total # = # of participants indicating “Yes” Sort responses to “in what ways” into common groups/themes.	A total of # (%) providers of natural resources information benefited from maintaining professional certification and/or licensure. They benefited in these ways: _____, _____, and _____.

<p>NRLU1 11.3 # of clients/end users of providers of natural resources information and advice that adopt recommended natural resource practices</p>	<p>[FOLLOW] How many of your clients/end users that you advise have adopted recommended natural resource practices?</p> <p>a. Does not apply to me b. (#) _____ clients or end users</p> <p>If 1 or more clients/end users have adopted practices, what is the most frequently adopted natural resource practice?</p>	<p>Total # = sum of client #</p> <p>Sort responses to “most frequently adopted” into common groups/themes.</p>	<p>Advised clients/end users (#, %) have adopted recommended natural resources practices, including _____ and _____.</p>
<p>NRLU - INDIVIDUALS AND ENTITIES WHO MANAGE HABITAT (RURAL PROPERTY OWNERS, HOMEOWNERS, PUBLIC PROPERTY MANAGERS, CONSULTANT FORESTERS, ARBORISTS)</p>			
Outcome Indicators in Logic Model & DM	Evaluation Question and Responses	Responses to Report in DM	Examples of Using this Information for Writing Impact
<p>SHORT-TERM – Increased Awareness and Education</p>			
<p>NRLU 2.1 # of individuals who manage habitat who increase awareness of cost-share and technical assistance programs and resources</p>	<p>[POST] As a result of attending [program], did you learn about cost-share and technical assistance programs and resources that are available?</p> <p>a. Yes b. No c. Not sure</p>	<p>Total # = # of participants indicating “Yes”</p>	<p>As a result of attending [program], there were # (%) participants who reported they learned about cost-share and technical assistance programs.</p>
<p>NRLU 2.2 # of individuals who manage habitat who increase awareness of natural resource management issues (e.g. invasive species, air quality, climate, etc.)</p>	<p>[POST] As a result of attending [program], did you learn about natural resource management issues (e.g., invasive species, air quality, climate, etc.)?</p> <p>a. Yes b. No c. Not sure</p> <p>If yes, what were the issues you learned?</p>	<p>Total # = # of participants indicating “Yes”</p> <p>Sort responses to “what were the issues” into common groups/themes.</p>	<p>As a result of attending [program], some # (%) participants reported they learned about natural resource management issues, including _____, _____, and _____.</p>
<p>NRLU 2.3 # of individuals who manage habitat who demonstrate knowledge gains of current science as applied to resource management</p>	<p>[POST] As a result of attending [program], I know more about current science applied to resource management.</p> <p>SD D Neither A SA</p>	<p>Total # = # of participants indicating “Agree” or “Strongly Agree”</p>	<p>As a result of attending [program], participants (#, %) reported they know more about current science applied to resource management.</p>
<p>NRLU 2.4 # of individuals who manage habitat who demonstrate increased knowledge of land management plans</p>	<p>[POST] As a result of attending [program], I know more about land management plans.</p> <p>SD D Neither A SA</p>	<p>Total # = # of participants indicating “Agree” or “Strongly Agree”</p>	<p>As a result of attending [program], # (%) participants reported they know more about land management plans.</p>

NRLU 2.5 # individuals who manage habitat who aspire to implement practices benefiting natural resources	[POST] Has attending [program] inspired you to implement habitat management practices that benefit natural resources? a. Yes b. No c. Not sure	Total # = # of participants indicating "Yes"	[Program] participants (#,%) reported they were inspired to implement habitat management practices that benefit natural resources.
MEDIUM-TERM - Changes in Behavior			
NRLU 7.1 # of individuals who manage habitat who contact professional advisors for natural resource management	[FOLLOW] Since attending [program], have you contacted a professional advisor to discuss natural resource management? a. Yes b. Not yet, but I plan to c. No	Total # = # of participants indicating "Yes"	Since attending [program], # (%) participants have contacted a professional advisor to discuss natural resource management.
NRLU 7.2 # of individuals who manage habitat who adopt, improve or maintain stewardship practices	[FOLLOW] As a result of attending [program], did you adopt, improve, or maintain existing stewardship practices? a. Yes, I adopted a new stewardship practice b. Yes, I modified an existing stewardship practice c. Yes, I maintained an existing stewardship practice d. No If you adopted new stewardship practices, what were those new practices? If you modified stewardship practices, what were those practices? If you maintained existing practices, what were those practices?	Total # = # of participants indicating "Yes" Sort responses to "what were those" into common groups/themes.	As a result of attending [program], # (%) participants adopted, improved, or maintained existing stewardship practices. Adopted new practices were ____ and ____. Modified practices were ____ and ____. Maintained practices were ____ and _____.
NRLU 7.3 # of individuals who manage habitat who create or revise their land management plan	[FOLLOW] Since attending [program], have you created or revised your land management plan? a. Yes, I created my land management plan b. Yes, I revised my land management plan c. Not yet, but I plan to d. No	Total # = # of participants indicating "Yes"	Since attending [program], # (%) participants created or revised their land management plan.
LONG-TERM - Impact on Community and System			

NRLU 12.1 # individuals who manage habitat that use/reference long-term goals and planning	[FOLLOW] Since attending [program], have you used or referenced long-term goals and planning? a. Yes b. No	Total # = # of participants indicating "Yes"	Since attending [program], # (%) participants have used or referenced long-term goals and planning.
NRLU 12.2 # individuals who manage habitat that indicate the plan directs natural resource management	[FOLLOW] Do you have a plan that directs natural resource management? a. Yes b. No	Total # = # of participants indicating "Yes"	There were # (%) [program] participants who reported they have a plan that directs natural resource management.
NRLU 12.3 # individuals who manage habitat reporting years of property managed under a plan	[FOLLOW] How many years have you managed habitat under a plan? a. Does not apply to me b. (#) _____ years	Total # = sum of years	For those who manage habitat, their properties have been managed under a plan for a total of # years.
NRLU 12.4 # acres of natural resources under management reported by individuals who manage habitat	[FOLLOW] How many acres of natural resources do you manage? a. Does not apply to me b. (#) _____ acres	Total # = sum of acres	For those who manage habitat, a total of # acres of natural resources were under management.
NRLU 12.5 # days of natural resources and land use reported by individuals who manage habitat	[FOLLOW] In 20##, for the natural resources you manage, how many days were they used? c. Does not apply to me d. (#) _____ days	Total # = sum of days May also consider calculating the average.	Those who manage habitat reported that the natural resources were used a total of # days in 20##. The average number of days for the year was #.#.
NRLU 12.6 # hunting leases implemented as reported by individuals who manage habitat	[FOLLOW] In 20##, how many hunting leases were implemented on the habitat you manage? a. Does not apply to me b. (#) _____ hunting leases	Total # = sum of hunting leases May also consider calculating the average.	A total of # hunting leases were implemented on the habitat managed in 20##. The average number of hunting leases for the year was #.#.
NRLU 12.7 \$ amount of revenue from timber sales, wood products manufacturing, and hunting leases as reported by individuals who manage habitat	[FOLLOW] In 20##, for the habitat you manage, what was the total revenue generated by timber sales, wood products manufacturing, and hunting leases? a. Does not apply to me b. \$ _____ Timber sales c. \$ _____ Wood products manufacturing d. \$ _____ Hunting leases	Total # = sum of total revenue May also consider sums for each type of revenue.	Individuals who manage habitat reported that 20## revenue for timber sales, wood products manufacturing, and hunting leases totaled \$ _____. Individuals who manage habitat reported 20## revenues were timber sales (\$ _____), wood products manufacturing (\$ _____), and hunting leases (\$ _____).
NRLU 12.8 \$ net value of timber stands (e.g., management leads to improved standing timber value because of increased growth of valuable trees)	[FOLLOW] For 20##, what was the net value of timber stands that you manage? a. Does not apply to me b. \$ _____ net value	Total # = sum of net value	For 20##, the total net value of managed timber stands was \$ _____.

NRLU 12.9 # of individuals who manage habitat who have access to more financial benefits (e.g., grants, other funding)	[FOLLOW] Since completing the [program], have you accessed more financial benefits (e.g., grants) for the habitat you manage? a. Yes b. Not yet, but planning to do this c. No If yes, what financial benefits did you receive?	Total # = # of participants indicating "Yes" Sort responses to "what financial benefits did you receive" into common groups/themes.	As a result of the [program], # (%) participants who manage habitat accessed more financial benefits. The benefits received were _____ and _____'.
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NRLU - DEVELOPERS OF PLANS OR POLICY
 (COMMUNITIES, PLAN COMMISSIONS, COLLABORATIVE GROUPS, GOVERNMENT OFFICES)

Outcome Indicators in Logic Model & DM	Evaluation Question and Responses	Responses to Report in DM	Examples of Using this Information for Writing Impact
SHORT-TERM - Increased Awareness and Education			
NRLU 3.1 # developers of plans/policy that demonstrate increased knowledge of planning processes	[POST] As a result of attending [program], I know more about planning processes. SD D Neither A SA	Total # = # of participants indicating "Agree" or "Strongly Agree"	[Program] participants (#, %) reported that as a result of attending, they know more about planning processes.
NRLU 3.2 # developers of plans/policy that demonstrate increased knowledge of the role of natural resources in community planning	[POST] As a result of attending [program], I know more about the role of natural resources in community planning. SD D Neither A SA	Total # = # of participants indicating "Agree" or "Strongly Agree"	[Program] participants (#, %) reported that as a result of attending, they know more about the role of natural resources in community planning.
NRLU 3.3 # developers of plans/policy that demonstrate awareness of public spaces as community assets	[POST] As a result of attending [program], I have become aware, or more aware, of public spaces being community assets. SD D Neither A SA	Total # = # of participants indicating "Agree" or "Strongly Agree"	[Program] participants (#, %) reported that as a result of attending, they are more aware of public spaces being community assets.
NRLU 3.4 # developers of plans/policy that demonstrate increased awareness of implementing tools and resources in planning processes	[POST] As a result of attending [program], I have become aware, or more aware, of tools and resources that exist for implementation of planning processes. SD D Neither A SA	Total # = # of participants indicating "Agree" or "Strongly Agree"	[Program] participants (#, %) reported that as a result of attending, they are more aware of tools and resources that exist for implementation of planning processes.
NRLU 3.5 # developers of plans/policy that increase skills to effectively engage residents in the planning process	[POST] As a result of attending [program], my skills to effectively engage residents in the planning process have increased. SD D Neither A SA	Total # = # of participants indicating "Agree" or "Strongly Agree"	[Program] participants (#, %) reported that as a result of attending, their skills have increased for effectively engaging residents in the planning process.
MEDIUM-TERM - Changes in Behavior			
NRLU 8.1 # developers of plans/policy that integrate natural resources into planning and policies	[FOLLOW] Since attending [program], have you integrated natural resources into planning and policies? a. Yes	Total # = # of participants indicating "Yes"	In the time since attending [program], # (%) developers of plans/policies have integrated natural resources into planning and policies.

	b. No		
NRLU 8.2 # plans/policies created that integrate natural resources into planning and policies	[FOLLOW] In the past year, how many plans/policies have you worked with that integrated natural resources? a. Does not apply to me b. # _____ plans/policies	Total # = sum of plans/policies	In the past year, developers have worked with # plans/policies that have integrated natural resources.
NRLU 8.3 # developers of plans/policy that use tools and resources in planning processes	[FOLLOW] In the past year, have you used tools and resources from the [program] in planning processes? a. Yes b. No	Total # = # of participants indicating "Yes"	In the past year, developers (#) have used [program] tools and resources in planning processes.
NRLU 8.4 # tools/resources used by developers of plans/policy during planning processes	[FOLLOW] In the past year, how many [program] tools and resources, have you used during planning processes? a. Does not apply to me b. (#) _____ tools/resources Which tools/resources have been the most beneficial?	Total # = sum of tools/resources Sort responses to "the most beneficial" into common groups/themes.	In the past year, developers have used # [program] tools during planning processes, reported the most beneficial were _____ and _____.
NRLU 8.5 # plans/policies created by developers of plans/policy that include tools and resources	[FOLLOW] In the past year, how many plans/policies were created using [program] tools/resources? a. Does not apply to me b. (#) _____ plans/policies	Total # = sum of plans/policies	In the past year, developers created # plans/policies using [program] tools/resources.
NRLU 8.6 # developers of plans/policy that engage residents in planning processes	[FOLLOW] In the past year, have you engaged residents in planning processes? a. Yes b. No	Total # = # of participants indicating "Yes"	In the past year, # developers have engaged residents in planning processes.
NRLU 8.7 # residents engaged in planning processes	[FOLLOW] In the past year, how many residents have engaged in planning processes? a. Does not apply to me b. (#) _____ residents	Total # = sum of residents	In the past year, # residents have been engaged in planning processes.
NRLU 8.8 # meetings for resident engagement in planning processes	[FOLLOW] In the past year, how many meetings have had resident engagement in planning processes? a. Does not apply to me b. (#) _____ meetings	Total # = sum of meetings	In the past year, residents were engaged in # meetings for planning processes.
NRLU 8.9 # communities engaged in planning processes	[FOLLOW] In the past year, how many communities have engaged in planning processes? a. Does not apply to me b. (#) _____ communities	Total # = sum of communities	In the past year, # communities have engaged in planning processes.

LONG-TERM - Impact on Community and System			
NRLU 13.1 # communities that implement natural resources in long-term planning and policies	[FOLLOW] Of the communities that you work with, how many have implemented natural resources in their long-term planning and policies? a. Does not apply to me b. (#) _____ communities	Total # = sum of communities	In the past year, there were # communities that implemented natural resources in their long-term planning and policies.
NRLU 13.2 # plans and policies implemented that have natural resources in long-term planning and policies	[FOLLOW] How many natural resources long-term plans or policies have been implemented? a. Does not apply to me b. (#) _____ long-term plans/policies	Total # = sum of long-term plans/policies	In the past year, # long-term plans/policies have been implemented.
NRLU 13.3 # communities that regularly implement opportunities for residents to participate in long-term planning processes and policies	[FOLLOW] How many communities include regular opportunities for residents to participate in their long-term planning processes and policies? a. Does not apply to me b. (#) _____ communities	Total # = sum of communities	A total of # communities have included regular opportunities for residents to participate in long-term planning processes and policies.

NRLU - ENGAGEMENT WITH OUTDOORS
 (YOUTH, K-12 TEACHERS AND OTHER ENVIRONMENTAL EDUCATORS, PUBLIC)

Outcome Indicators in Logic Model & DM	Evaluation Question and Responses	Responses to Report in DM	Examples of Using this Information for Writing Impact
SHORT-TERM - Increased Awareness and Education			
NRLU 4.1 # <youth> participants aware of benefits of connecting with nature	[POST] As a result of attending [program], I am more aware of the benefits of connecting with nature. a. Yes b. Sort of c. No	Total # = # of participants indicating "Yes"	As a result of attending [program], # youth are more aware of the benefits of connecting with nature.
NRLU 4.2 # <youth> pre-post awareness gained of benefits of connecting with nature	[POST] How aware are you of the benefits of connecting with nature: [Before and After] a. Not aware b. Somewhat aware c. Very aware	Total # = # of participants whose responses advanced (increased awareness) from before to after	As a result of attending [program], # youth increased their awareness of the benefits of connecting with nature.
NRLU 4.3 # educators indicating increased awareness of benefits of connecting with nature	[POST]<If environmental educator/teacher> As a result of attending [program], I am more aware of the benefits of connecting with nature.	Total # = # of participants indicating "Agree" or "Strongly Agree"	There were # K-12 teachers or environmental educators who reported they are more aware of

	SD D Neither A SA		the benefits of connecting with nature, as a result of the [program].
NRLU 4.4 # <youth> participants indicating increased knowledge of how to apply outdoor activities in their lives	[POST] As a result of attending [program], I know more about how to apply outdoor activities in my life. a. Yes b. Sort of c. No	Total # = # of participants indicating "Yes"	As a result of attending [program], # youth reported they know more about how to apply outdoor activities in their lives.
NRLU 4.5 # <youth> participants indicating desire to participate in outdoor activities	[POST] I have a desire to participate in outdoor activities. a. Yes b. Sort of c. No	Total # = # of participants indicating "Yes"	After attending [program], # youth reported a desire to participate in outdoor activities.
NRLU 4.6 # educators indicating increased knowledge on how to integrate natural resources into the curriculum	[POST] <if environmental educator/teacher> [program] has increased my knowledge about how to integrate natural resources into curriculum. SD D Neither A SA	Total # = # of participants indicating "Agree" or "Strongly Agree"	As a result of the [program], # K-12 teachers or environmental educators reported increased knowledge about integrating natural resources into curriculum.
NRLU 4.7 # attendees in outreach event / outreach station	[MONITOR]	count of participants (attendance)	In [year], there were # attendees in the outreach events/stations.
MEDIUM-TERM - Changes in Behavior			
NRLU 9.1 # <youth> participants participating in outdoor activities	[FOLLOW] Since attending [program], have you participated in outdoor activities? a. Yes b. No	Total # = # of participants indicating "Yes"	Since attending [program], # youth reported they have participated in outdoor activities.
NRLU 9.2 # participants adopt natural resource-based lesson plans into teaching curriculum	[FOLLOW] <if environmental educator/teacher> Since attending [program], have you adopted natural resource-based lesson plans into teaching curriculum? a. Yes b. Not yet, but planning to do this c. No	Total # = # of participants indicating "Yes"	Since completing the NoT training, # K-12 teachers or environmental educators reported they have adopted natural resource-based lesson plans into their teaching curriculum.
NRLU 9.3 # programs taught by NoT educators	[FOLLOW] <if environmental educator/teacher> How many "Nature of Teaching" programs have you taught? a. Does not apply to me b. (#) _____ NoT programs	Total # = sum of NoT programs	In [year], K-12 school teachers or environmental educators provided # NoT programs.
NRLU 9.4 # programs taught by Extension educators	[MONITOR]	Review Digital Measures reporting system to gather # of programs taught by Extension Educators	This information would be provided in the "What Has Been Done" section of the impact statement. This is a description of the program, not results or impact.

			In [year], Purdue Extension educators provided # NoT programs.
LONG-TERM - Impact on Community and System			
NRLU 14.1 # youth that are more environmentally literate	[FOLLOW] As a participant in NoT in the past, did you learn about the environment? a. Yes b. No	Total # = # of participants indicating "Yes"	As a result of participating in NoT, # youth participants indicated they learned about the environment.
NRLU 14.2 # teachersteachingabout nature	[FOLLOW] <if environmental educator/teacher> Do you teach about nature? c. Does not apply to me d. Yes e. No	Total # = # of participants indicating "Yes"	In [year] there were # K-12 teachers who reported they taught about nature. This is an <increase/decrease> in numbers of teachers from the previous year.
NRLU 14.3 # teachersteachingNoT curriculum after 5 years	[FOLLOW] <if environmental educator/teacher> How long have you taught Nature of Teaching curriculum? a. Does not apply to me b. 1 year c. 2 years d. 3 years e. 4 years f. 5 or more years	Total # = # of participants indicating "5 or more years"	In [year], # K-12 teachers have taught NoT for 5 or more years.

NRLU - NATURAL RESOURCES BASED ECONOMY

(BUSINESSES THAT ARE BASED ON NATURAL RESOURCES; E.G., COMMERCIAL FISHERIES, PRIMARY AND SECONDARY WOOD PRODUCTS MANUFACTURING)

Outcome Indicators in Logic Model & DM	Evaluation Question and Responses	Responses to Report in DM	Examples of Using this Information for Writing Impact
SHORT-TERM - Increased Awareness and Education			
NRLU 5.1 # of participants indicating increased knowledge of best management practices for businesses	[POST] As a result of attending [program], I became more knowledgeable of best management practices for businesses. SD D Neither A SA	Total # = # of participants indicating "Agree" or "Strongly Agree"	There were # (%) participants who reported their knowledge of best management practices for businesses increased as a result of the [program].
NRLU 5.2 # of participants indicating increased knowledge of sustainable production	[POST] As a result of attending [program], I became more knowledgeable of sustainable production. SD D Neither A SA	Total # = # of participants indicating "Agree" or "Strongly Agree"	There were # (%) participants who reported their knowledge of sustainable production increased as a result of the [program].

NRLU 5.3 # of participants indicating increased knowledge of value adding to natural resources	[POST] As a result of attending [program], I became more knowledgeable of value adding to natural resources. SD D Neither A SA	Total # = # of participants indicating "Agree" or "Strongly Agree"	There were # (%) participants who reported their knowledge of value adding to natural resources increased as a result of the [program].
MEDIUM-TERM - Changes in Behavior			
NRLU 10.1 # of participants that adopt best management practices and technology that result in more viable and sustainable natural resource-based businesses	[FOLLOW] Since attending [program], have you adopted any best management practices and/or technologies? a. Yes b. No If Yes, did the adoption of these best management practices and/or technologies result in a more viable and sustainable natural resource-based business? a. Yes b. No If Yes, please describe the results of adopting the best management practices/technologies on the natural resource-based business.	Total # = # of participants indicating "Yes" Total # = # of participants indicating "Yes" Sort responses to "describe the results" into common groups/themes.	Since attending [program], # (%) participants have adopted best management practices or technologies. For those who adopted best management practices/technologies, # reported those resulted in a more viable and sustainable natural resource-based business. Results of those adopted best management practices/technologies were _____, _____, and _____.
NRLU 10.2 # participants that integrate concepts that enhance/sustain natural resources	[FOLLOW] Since attending [program], have you integrated any concepts that enhance/sustain natural resources? a. Yes b. No If Yes, what concepts did you find the most beneficial?	Total # = # of participants indicating "Yes" Sort responses to "the most beneficial" into common groups/themes.	Since attending [program], # (%) participants reported integrating concepts that enhance or sustain natural resources. Concepts participants found most beneficial were _____, and _____, and _____.
LONG-TERM - Impact on Community and System			
NRLU 15.1 # of created and maintained economically viable natural resources-based businesses	[FOLLOW] Have you created or maintained an economically viable natural resources-based business? a. Yes, created a new business b. Yes, maintained an existing business c. Not yet, but I am planning to d. No	Total # = # of participants indicating "Yes, created..." or "Yes, maintained..."	In the two years following the [program], participants reported that they had created new businesses (#) or maintained an existing business (#). There were # participants who reported they are still planning to create a new business.
NRLU 15.2 \$ revenue of businesses based on natural resources	[FOLLOW] What is the annual revenue of your natural resource-based business? a. Does not apply to me b. \$ _____ annual revenue	Total # = sum of annual revenue May also consider calculating the average.	In [year], [program] participants reported a total of \$ _____ in annual revenue. The average reported revenue was \$ _____.
NRLU 15.3 # of operating natural resource-based businesses that	[MONITOR]	Count the number of Indiana natural resource-based businesses	In the past 3 years, Indiana had an <increase/decrease> in natural resource-based

maintain healthy, growing and sustainable economy			businesses. In [year], there were # businesses, in [year], there were # businesses, and in [year] there were # businesses.
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NRLU - NATURAL RESOURCES STEWARDSHIP, VOLUNTEERISM, AND COMMUNITY ENGAGEMENT
 (ADULTS APPLYING/SHARING NATURAL RESOURCE KNOWLEDGE/SKILLS TO COMMUNITY PROJECTS)

Outcome Indicators in Logic Model & DM	Evaluation Question and Responses	Responses to Report in DM	Examples of Using this Information for Writing Impact
SHORT-TERM - Increased Awareness and Education			
NRLU 16.1 # of participants indicating increased awareness and understanding of natural resource topics.	[POST] After completing [program], I am more aware of natural resource topics. SD D Neither A SA [POST] After completing [program], I understand more about natural resource topics. SD D Neither A SA	Total # = # of participants indicating "Agree" or "Strongly Agree"	After completing [program], # (%) participants indicated they were more aware of natural resource topics. After completing [program], # (%) participants indicated they understood more about natural resource topics.
NRLU 16.2 # of participants indicating increased knowledge of how to take action in their communities.	[POST] After completing [program], I have more knowledge about how to take action in my community. SD D Neither A SA	Total # = # of participants indicating "Agree" or "Strongly Agree"	After completing [program], # (%) participants indicated they have more knowledge about how to take action in their community.
MEDIUM-TERM - Changes in Behavior			
NRLU 17.1 # of organizations, networks, partnerships, collaborations engaging with participants to improve natural resources stewardship.	[FOLLOW] Since [program], how many organizations, networks, partnerships or collaborations have engaged with you to improve natural resources stewardship? (#) _____ organizations (#) _____ networks (#) _____ partnerships (#) _____ collaborations	Total # = sum of each item category, and total overall	One year after [program], participants reported they had engaged with # organizations, # networks, # partnerships, and # collaborations to improve natural resources stewardship.
NRLU 17.2 # of participants that engaged in a community science, stewardship or education project.	[FOLLOW] Since [program], have you engaged in any community science, stewardship or education projects? a. Yes b. No If Yes, please describe your project(s)?	Total # = # of participants indicating "Yes" Sort responses to "describe your projects" into common groups/themes.	One year after [program], # (%) participants reported they had engaged in community science, stewardship and education projects. Most reported projects were ____, ____, and ____.
LONG-TERM - Impact on Community and System			

<p>NRLU 18.2 # of projects or practices implemented by organizations, networks, partnerships, collaborations engaging with participants to improve natural resources.</p>	<p>[FOLLOW] Since [program], how many projects or practices have been implemented by organizations, networks, partnerships or collaborations that engaged with you to improve natural resources? (#) _____ projects (#) _____ practices Please provide a description of your projects. Please provide a description of your practices.</p>	<p>Total # = sum of each item category, and total overall Sort responses to “projects” into common groups/themes. Sort responses to “practices” into common groups/themes.</p>	<p>One year after [program], participants reported they had engaged with organizations, networks, partnerships or collaborations and implemented # projects and # practices to improve natural resources. Most reported projects were ____, ____, and ____. Most reported practices were ____, ____, ____.</p>
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Logic Model: Natural Resources & Land Use Logic Model

Situation: Natural resources benefit all of society in a variety of ways including clean air, clean water, biodiversity, the economy, climate and human health and wellbeing. Decisions made by landowners, advisors and communities regarding natural resources management have a direct impact on these benefits. However, these decisions can have negative consequences when made with incomplete knowledge of short- and long-term implications. Educational programs that lead audiences to make informed decisions and to network with appropriate resources can contribute to and benefit healthy natural resources.

Purdue Extension Program Goals for 2019-2020: ANR Natural Resources and Land Use

Goal 1: To foster integrative decision making and natural resource management plans to sustain and improve resources for food, fiber, fuel and drinking water, promote economic growth, create recreation opportunities, improve air quality and health of forests, waterbodies, and other ecosystems, provide wildlife habitat, or conserve open space and wildlands.

Goal 2: To enhance Indiana stakeholder's understanding and decision making about land use planning, policies, and practices that enhance their local environment and community quality of life.

INPUTS	OUTPUTS		A. OUTCOMES – IMPACT		
	Activities	Participation	Short-term	Medium-term	Longer-term
What we invest	What we do	Who is reached	What do we think participants will know, feel, or be able to do after participating in program?	How do we think participants will behave or act differently after participating in program?	What kind of impact can result if participants behave or act differently after participating in program?
Purdue Investments <ul style="list-style-type: none"> ▪ Extension Educators, Field Staff, Campus Staff ▪ Purdue Ag Centers and other properties ▪ Agricultural Communications ▪ Purdue Pesticides Program Partnerships <ul style="list-style-type: none"> ▪ State Agencies ▪ Federal Agencies ▪ IN Conservation Partnership ▪ Landowner/producer organizations ▪ Professional societies/organizations ▪ CISMAs ▪ HTIRC ▪ Industry organizations and associations ▪ Cooperatives ▪ Other Universities/Extension ▪ NGOs ▪ K-12 Schools 	<ul style="list-style-type: none"> ▪ Organize statewide conferences ▪ Organize regional conferences, summits, and workshops ▪ Create/compile online educational resources ▪ Create and organize educational programs ▪ Create and organize networking activities ▪ Develop and maintain promotional materials ▪ Develop demonstrations ▪ Provide technical assistance 	Providers of natural resources information and advice - natural resources advisors, Extension Educators	NRLU1.1 # of providers of natural resources information and advice who demonstrate knowledge gain regarding application of current science NRLU1.2 # of providers of natural resources information and advice who demonstrate new or improved skills to apply science-based information to job NRLU 1.3 # of providers of natural resources information and advice who aspire to submit CEUs to maintain their professional certification or license NRLU 1.4 # of providers of natural resources information and advice who demonstrate knowledge gain regarding data services, tools and resources pertaining to natural resources and environment	NRLU1 6.1 # of providers of natural resources information and advice who adopt a new practice or change/modify an existing practice in job NRLU1 6.2 # of providers of natural resources information and advice who submit CEUs to professional society NRLU1 6.3 # of providers of natural resources information and advice who use new knowledge/skill to modify consultations and recommendations related to natural resource concerns	NRLU1 11.1 # of providers of natural resources information and advice who report improved job performance NRLU1 11.2 # of providers of natural resources information and advice who benefit from maintaining professional certification or license (e.g., improved pay, more job opportunities) NRLU1 11.3 # of clients/end users of providers of natural resources information and advice that adopt recommended natural resource practices

		Individuals and entities who manage habitat - rural property owners, homeowners, public property managers, consultant foresters, arborists	NRLU 2.1 # of individuals who manage habitat who increase awareness of cost-share and technical assistance programs and resources NRLU 2.2 # of individuals who manage habitat who increase awareness of natural resource management issues (e.g. invasive species, air quality, climate, etc.) NRLU 2.3 # of individuals who manage habitat who demonstrate knowledge gains of current science as applied to resource management NRLU 2.4 # of individuals who manage habitat who demonstrate increased knowledge of land management plans NRLU 2.5 # individuals who manage habitat who aspire to implement practices benefiting natural resources	NRLU 7.1 # of individuals who manage habitat who contact professional advisors for natural resource management NRLU 7.2 # of individuals who manage habitat who adopt, improve or maintain stewardship practices NRLU 7.3 # of individuals who manage habitat who create or revise their land management plan	NRLU 12.1 # individuals who manage habitat that use/reference long-term goals and planning NRLU 12.2 # individuals who manage habitat that indicate the plan directs natural resource management NRLU 12.3 # individuals who manage habitat reporting years of property managed under a plan NRLU 12.4 # acres of natural resources under management reported by individuals who manage habitat NRLU 12.5 # days of natural resources and land use reported by individuals who manage habitat NRLU 12.6 # hunting leases implemented as reported by individuals who manage habitat NRLU 12.7 \$ amount of revenue from timber sales, wood products manufacturing, and hunting leases as reported by individuals who manage habitat NRLU 12.8 \$ net value of timber stands (e.g., management leads to improved standing timber value because of increased growth of valuable trees) NRLU 12.9 # of individuals who manage habitat who have access to more financial benefits (e.g., grants, other funding)
		Developers of plans or policy - communities, plan commissions, collaborative groups, government offices	NRLU 3.1 # developers or plans/policy that demonstrate increased knowledge of planning processes NRLU 3.2 # developers of plans/policy that demonstrate increased knowledge of the role of natural resources in community planning NRLU 3.3 # developers of plans/policy that demonstrate awareness of public spaces as community assets NRLU 3.4 # developers or plans/policy that demonstrate increased awareness of implementing tools and resources in planning processes NRLU 3.5 # developers or plans/policy that increase skills to effectively	NRLU 8.1 # developers of plans/policy that integrate natural resources into planning and policies NRLU 8.2 # plans/policies created that integrate natural resources into planning and policies NRLU 8.3 # developers of plans/policy that use tools and resources in planning processes NRLU 8.4 # tools/resources used by developers of plans/policy during planning processes NRLU 8.5 # plans/policies created by developers of plans/policy that include tools and resources NRLU 8.6 # developers of plans/policy that engage residents in planning processes	NRLU 13.1 # communities that implement natural resources in long-term planning and policies NRLU 13.2 # plans and policies implemented that have natural resources in long-term planning and policies NRLU 13.3 # communities that regularly implement opportunities for residents to participate in long-term planning processes and policies

			engage residents in the planning process	NRLU 8.7 # residents engaged in planning processes NRLU 8.8 # meetings for resident engagement in planning processes NRLU 8.9 # communities engaged in planning processes	
		Engagement with outdoors - youth, K-12 teachers and other environmental educators, public	NRLU 4.1 # participants aware of benefits of connecting with nature NRLU 4.2 # pre-post awareness gained of benefits of connecting with nature NRLU 4.3 # educators indicating increased awareness of benefits of connecting with nature NRLU 4.4 # participants indicating increased knowledge of how to apply outdoor activities in their lives NRLU 4.5 # participants indicating desire to participate in outdoor activities NRLU 4.6 # educators indicating increased knowledge on how to integrate natural resources into the curriculum NRLU 4.7 # attendees in outreach event / outreach station	NRLU 9.1 # participants participating in outdoor activities NRLU 9.2 # participants adopt natural resource-based lesson plans into teaching curriculum NRLU 9.3 # programs taught by NoT educators NRLU 9.4 # programs taught by Extension educators	NRLU 14.1 # youth that are more environmentally literate NRLU 14.2 # teacher teaching about nature NRLU 14.3 # teacher teaching NoT curriculum after 5 years
		Natural Resources based economy - businesses based on natural resources, e.g., commercial fisheries, primary & secondary wood products manufacturing	NRLU 5.1 # of participants indicating increased knowledge of best management practices for businesses NRLU 5.2 # of participants indicating increased knowledge of sustainable production NRLU 5.3 # of participants indicating increased knowledge of value adding to natural resources	NRLU 10.1 # of participants that adopt best management practices and technology that result in more viable and sustainable natural resource-based businesses NRLU 10.2 # participants that integrate concepts that enhance/sustain natural resources	NRLU 15.1 # of created and maintained economically viable natural resources-based businesses NRLU 15.2 \$ revenue of businesses based on natural resources NRLU 15.3 # of operating natural resource-based businesses that maintain healthy, growing and sustainable economy
		Natural Resources Stewardship, Volunteerism, and Community Engagement - adults applying/sharing natural resource knowledge/skills to community projects	NRLU 16.1 # of participants indicating increased awareness and understanding of natural resource topics. NRLU 16.2 # of participants indicating increased knowledge of how to take action in their communities.	NRLU 17.1 # of organizations, networks, partnerships, collaborations engaging with participants to improve natural resources stewardship. NRLU 17.2 # of participants that engaged in a community science, stewardship or education project.	NRLU 18.2 # of projects or practices implemented by organizations, networks, partnerships, and collaborations engaging with participants to improve natural resources.

Assumptions 1) Continued institutional support for natural resources and land use 2) Required staffing levels will not be reduced 3) Extension can adapt to different models of program delivery with comparable use and effectiveness	External Factors 1) Influence of the economy and land value on the relative cost/value of natural resource management and land use 2) Availability of government and NGO investments in cost share and technical assistance programs 3) Significant changes in program delivery from outside influence 4) Lack of control of future natural resource issues society will face
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Evaluation tools and metrics:

<u>Needs Assessment</u>	<u>Process Evaluation</u>	<u>Short-Term Evaluation</u>	<u>Medium-Term Evaluation</u>	<u>Long-Term / Impact Evaluation</u>
Primary data collection of partnering agencies Secondary data sources to consider <ul style="list-style-type: none"> • Land use • Land cover • Demographics • Ag stats • Recreation and use surveys • Census - https://www.census.gov/programs-surveys/fhwar.html 	Purpose: Program improvement Sample approaches/questions: Ask questions and gather data during and/or at the end of the program. Ask participants what they liked and didn't like about the program. Ask participants to give suggestions for improvement.	Purpose: Measure knowledge, attitude, skill, or aspiration gained by program attendees. Sample approaches/questions: Did you learn something new about ____? Yes – No – Not Sure I learned something new about ____. SD D N S SA Pre/post-test of knowledge I am aware of the benefits of connecting with nature. Before: not at all a bit some a lot After: not at all a bit some a lot	Purpose: Measure adoption of practices and changes in behavior by program attendees. Sample approaches/questions: Since the program, have you adopted best management practices for your land? Yes – No – Not Sure If yes, which practices did you adopt? Have you held meetings to engage local residents in the natural resources planning? Yes – No – Not Sure	Purpose: Measure changes in social, economic, civic and environmental conditions resulting from adoption of practices and changes in behaviors. Sample approaches/questions: As a result of the best management practices you adopted, have you experienced economic improvement or cost savings? Yes – No – Not sure If yes, what is the estimate of that economic improvement? ___ \$0-\$100 ___ \$101-\$500 ___ \$501-1,000 ___ \$1,001-\$5,000 ___ \$5,001-\$10,000 ___ Over \$10,000