Evaluation Plan Overview

The evaluation plan is designed to monitor progress toward three primary outcomes: fostering national and cross-institutional research collaboration, improving the quality and accessibility of urban ecosystem and agriculture data, and accelerating the development and dissemination of high-quality research.

To measure these outcomes, the plan integrates process evaluation (ongoing monitoring) and summative evaluation (mid-term and final assessments).

Outcomes*:*

1. Increase national and/or cross-institutional research collaboration and training efforts
2. Improve the quality and accessibility of data related to urban ecosystem and agriculture research and research products (e.g., de-silo the current fragmented state of urban data systems)
3. Increase the amount and speed at which high quality research is developed, implemented, and disseminated

Process evaluation will include assessing the extent to which project activities (IRN development and activities; Data Hub development and utilization; and professional development offerings) are advancing toward the goals. IRN development and collaborative work will be assessed using meeting agendas, minutes, and a description of the IRN composition, deliverables (e.g., standardized metrics developed) and incubation projects supported. The Data Hub and Repository will create a data and research project inventory to establish a baseline rate of utilization overall and by key stakeholder characteristics. Utilization of the Data Hub and repository by stakeholder characteristics will also be assessed using database analytics. Professional development offerings will be assessed using rates of registration, participation, satisfaction, and pre/post assessments of knowledge, self-efficacy, and intention to implement skills. Annual surveys, listening sessions, and/or case studies will be used to understand needs and utilization of IRN, Data Hub, and professional development offerings. Hubspot will be used to track participation in IRN and professional development offerings. Hubspot will also house data to be utilized as a sampling frame for annual surveys, listening sessions, and/or case studies for mid-year and long-term outcomes.

Summative evaluation will assess long-term impact through indicators such as adoption of IRN frameworks by stakeholder groups, utilization of IRN-developed best practices, number of developed and funded research projects, and publications in high-impact journals among those participating in professional development offerings and/or using Data Hub resources. Comparative analyses will examine differences in research development and dissemination (e.g., acceptance rates by journals and impact factors) overall and by stakeholder type, region, and utilization of the project's resources (high vs. low) levels, as well as against publications rates identified in the peer-reviewed literature. Case studies and interviews will provide deeper insights into how IRNs, the Data Hub, and training activities influence the longer-term outcomes. Annual surveys, listening sessions, and/or case studies will also be used to understand how the IRNs, Data Hub, and

professional development offerings supported the development of research, adoption of best practices or IRN frameworks, and the faster dissemination of research to peer-review.

Evaluation Activities

Outcome	Activity	Process Evaluation (ongoing)	Summative Evaluation (mid-term and final reports)
Increase national and/or cross-institutional research collaboration and training efforts	Building and facilitating National Integrated Research Networks (IRNs) that will convene experts across key topic areas to generate research agendas and share best practices	Rates of participation by participant and organizational characteristics (e.g., tenure status, LGU type, expertise); stakeholder type # of incubation projects identified and/or supported overall and by IRN areas and by stakeholder type Research agenda and best practices development by meeting agenda, minutes, action items completed; # of RFAs responded to within research agenda topical areas; # of and type of best practice offerings developed and disseminated Annual survey and/or listening sessions to identify research gaps and support needs of stakeholders	#, %, rates of change related to adoption/implementation of IPN frameworks key stakeholders overall and by U.S. region Rates of best practices utilization in research publications or products # of funded research projects within research agenda topical areas # of publications in high impact factor journals and response of journal (e.g., desk acceptance, major revision, minor revision) Annual surveys, case studies, and/or interviews with stakeholders to assess the extent to which goals were achieved
Improve the quality and accessibility of data related to urban ecosystem and agriculture research	Developing and maintaining an Urban Data Hub that will house data from research projects,	Create an inventory of research projects #/% changes in products available to	# of funded research projects using Data Hub products

Outcome	Activity	Process Evaluation (ongoing)	Summative Evaluation (mid-term and final reports)
and research products (e.g., de-silo the current fragmented state of urban data systems)	research outputs, and make accessible urban data sets nationwide. Products include a Research repository and Urban Map Room to facilitate sharing of data and data visualization Increase the quality and utilization of standardized metrics of urban nature-based solutions	researchers and stakeholders (type, topic area) Rates of product utilization and by user characteristics (LGU/org type; researcher type/tenure) #/% of cross-institutional research projects using Hub # of standardized metrics developed and utilized overall, by IRN area, and by service user characteristics Annual survey and/or listening sessions to identify needs and service gaps	# of publications or funded proposals using Data Hub products # of publications in high impact factor journals and response of journal (e.g., desk acceptance, major revision, minor revision)
Increase the amount and speed at which high quality research is developed, implemented, and disseminated	Providing professional development and training in multiple modalities including in-person skill building, online and/or hybrid training opportunities, and resource dissemination	Changes in rates of participation with professional development offerings overall and by stakeholder type Participant characteristics (e.g., LGU type, tenure status); stakeholder type Pre/Post tests to examine changes in knowledge, beliefs, and behavior intention	# and rate of research proposals development overall and by high and low-service user # and rate of publications in high impact factor journals compared to national averages identified in the peer reviewed literature # and rate of publications in high impact factor journals overall and by high and low service user # of abstracts submitted, accepted, or invited

Outcome	Activity	Process Evaluation (ongoing)	Summative Evaluation (mid-term and final reports)
		Participant satisfaction ratings Identification of needs through interviews or listening sessions Annual needs assessment and service utilization survey	overall and by high and low service users

Data Sources:

Data Hub and Repository Analytics. These data will be used to understand evaluate changes in the availability, and utilization, of data by stakeholders and by topical area.

Event participation. Hubspot is a CRM that will be used to track event registration, participation, and engagement with the myriad resources disseminated throughout the life of the project. It will also be used as a sampling frame for annual surveys, listening sessions, case studies, and other evaluation-related activities.

Annual surveys. Surveys will be conducted annually with stakeholders and event participants to understand changes in adoption of research products, frameworks, as well as gaps in services. This will also allow for comparisons in research development outcomes to by a variety of characteristics, including high vs. low service users; organizational characteristics; IRN topic areas; regional differences; and the potential mediating or moderating effects of services on the development and dissemination of high-quality research.

Interviews, listening sessions, and/or case studies. These data sources will be used to identify gaps in services and to evaluation the extent to which IRNs, Data Hub, and professional development activities are influencing the project outcomes.