

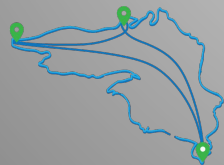
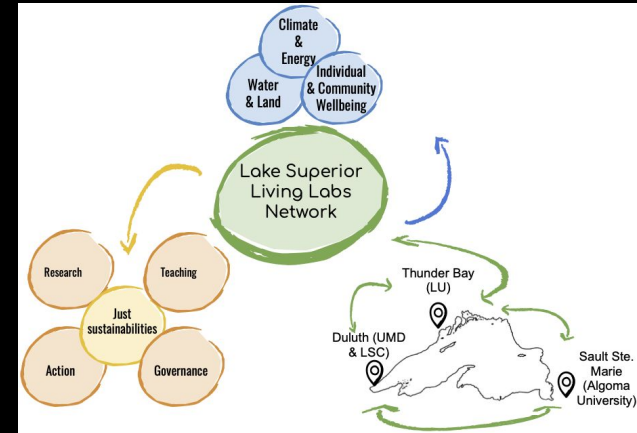
Scoping Review Research for the Lake Superior Living Labs Network

Lindsay Galway, Associate Professor Of Health Sciences, Lakehead University

Kelsey Jones-Casey, LSLLN Research Coordinator

Rachel Portinga, LSLLN Network Coordinator

Charles Levkoe, Canada Research Chair in Sustainable Food Systems, Lakehead University



LSLLN

Lake Superior Living Labs Network



Lake Superior COLLEGE

SSHRC



Lakehead UNIVERSITY

UMD
UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

Algoma UNIVERSITY

Canada

■ Goals:

1. What are Living Labs? What is the LSLLN?
2. What are scoping reviews, when are they useful, and how do you do them?
3. What are we hoping to learn from our own Living Labs scoping review? How will a scoping review inform our work together?
4. What are questions that you - as network members - want answered about living labs, and how the living lab model can support your work?

Setting the stage

What are living labs?

Setting the stage

What are living labs?

"A living lab is a physical or virtual space in which to **solve** societal challenges, especially for urban areas, by **bringing together** various stakeholders for **collaboration and collective ideation**." (Hossain et al. (2019))

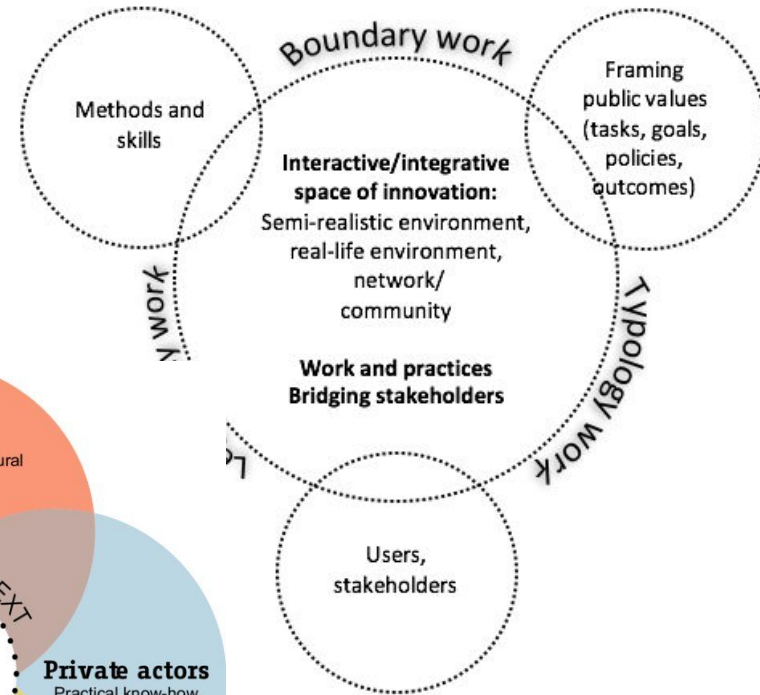
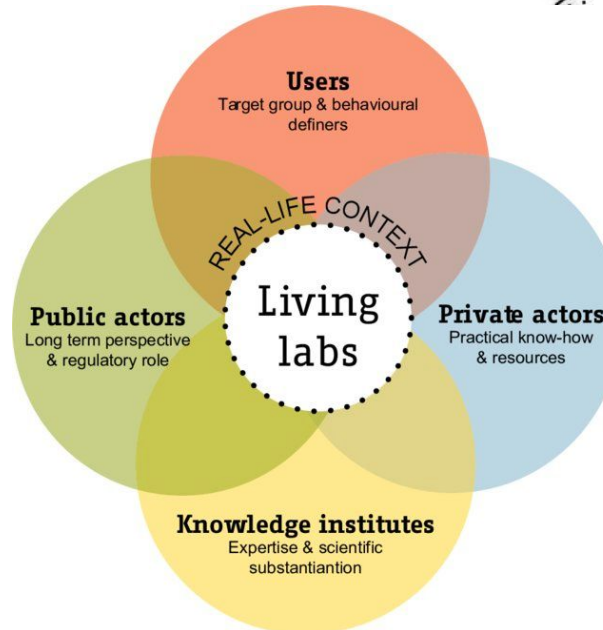
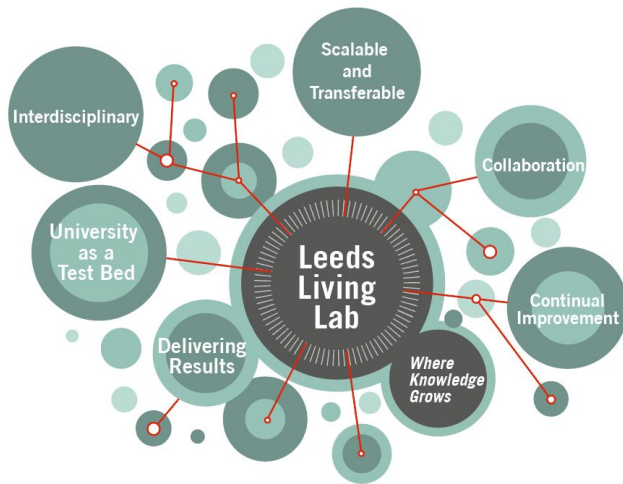
"Public-private-people partnerships **working together** on the **iterative** development of innovations in their real-life **context**" (Steen & Van Bueren, 2017)

"...an open innovation milieu where **new constellations, issues and ideas evolve** from bottom-up long-term **collaborations amongst diverse stakeholders**" Björgvinsson et al. (2012)

"Living Labs are defined as **user-centred**, open innovation ecosystems based on systematic **user co-creation approach, integrating** research and innovation processes in **real life** communities and settings." (European Network of Living Labs (ENoLL, 2019)).

"Living Labs upend the closed-door model of conventional research. They **welcome the community** into the heart of the design process, providing a **feedback loop** that enables more elegant solutions to more refined questions" (Anne Whitelaw, Concordia University).

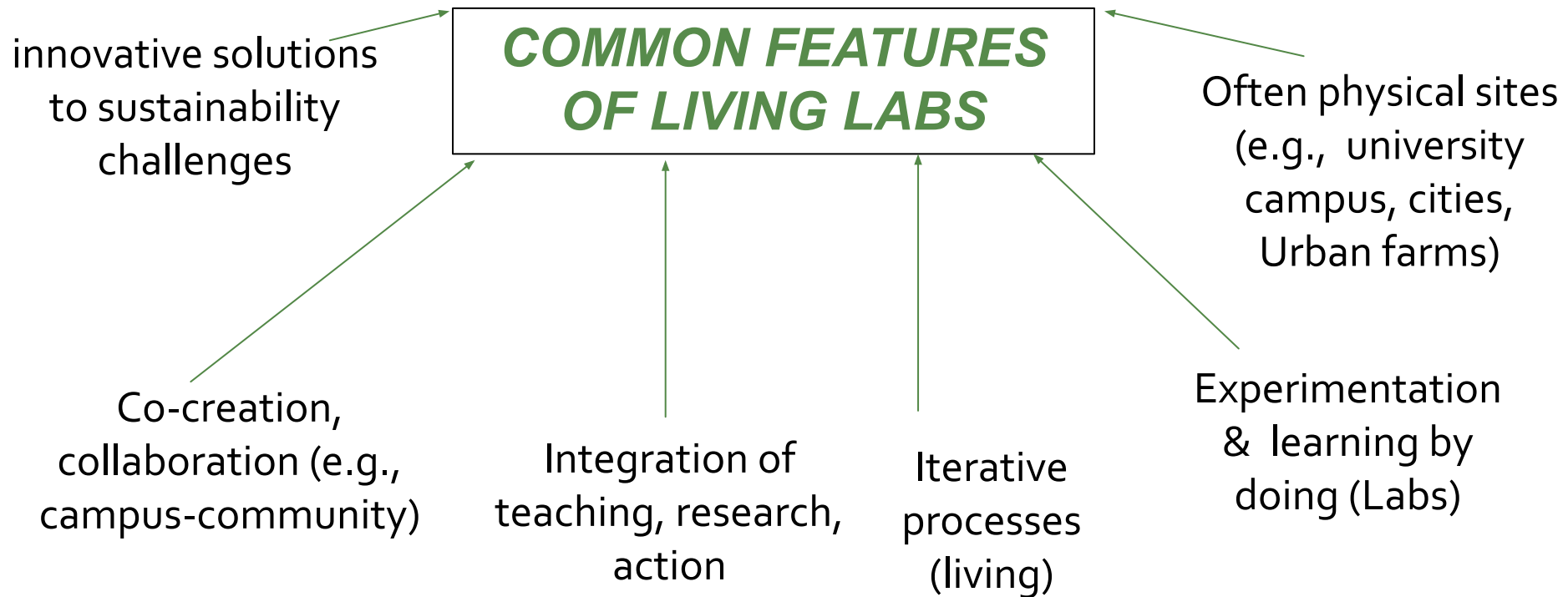
"offer an arena for **reflexive, adaptive, and multi-actor learning environments**, where new practices of self-organization and novel (infra-) structures can be tested within their real-world context." (Puerari et al. (2019))



Setting the stage

What are living labs?

... emerging approaches !



Setting the stage

What are living labs?

... emerging approaches !

Governance
structures?

Networks are rare

**KEY GAP &
OPPORTUNITIES**

Regional setting
(i.e. watershed)?

Tools and processes
support learning and
working together

Scales (regional
scale and nested
scales)

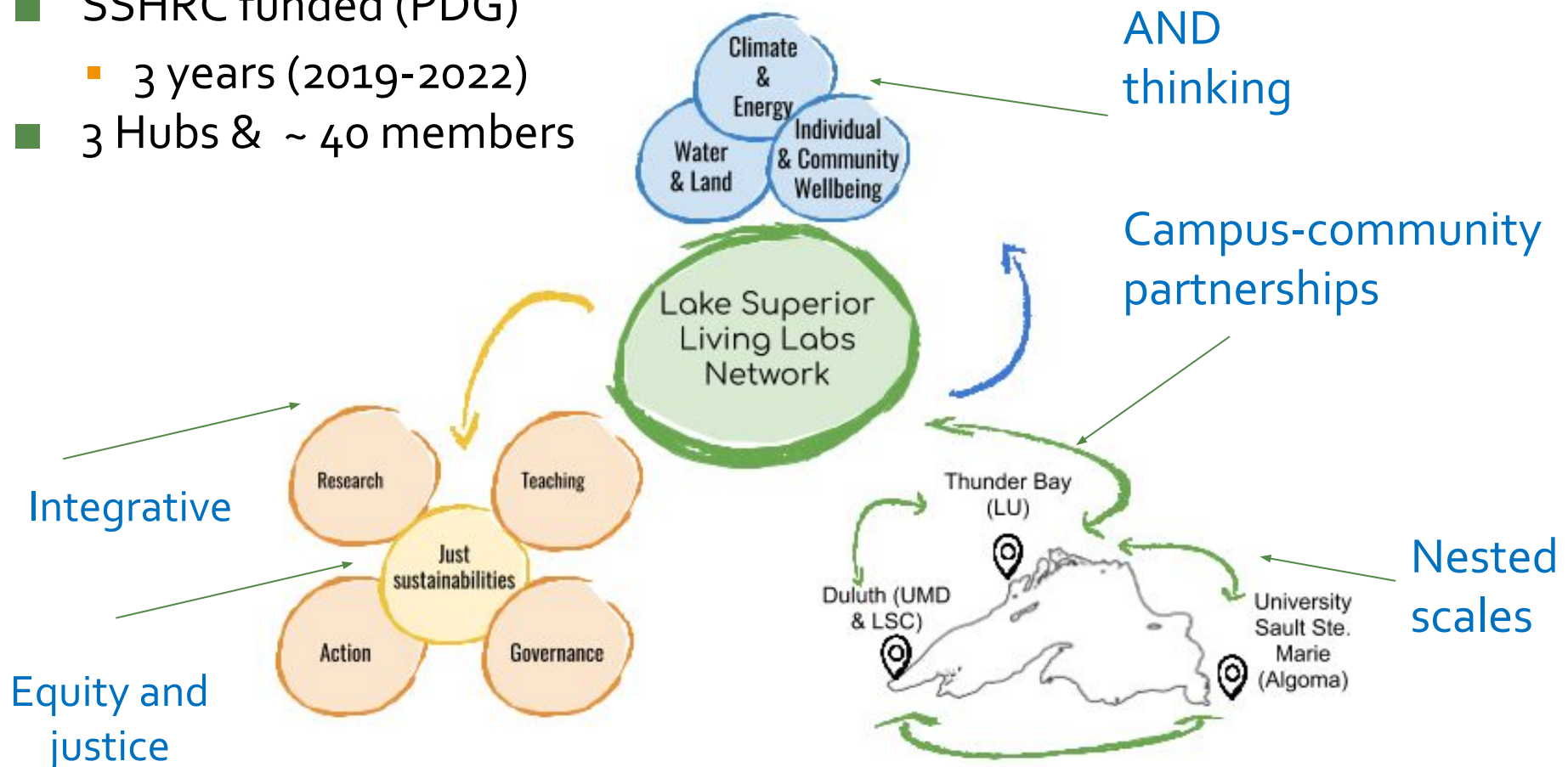
Limited use of
social sciences
research

Justice and equity
often absent

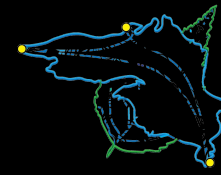
Setting the stage

What is the Lake Superior Living Labs Network?

- SSHRC funded (PDG)
 - 3 years (2019-2022)
- 3 Hubs & ~ 40 members



Setting the stage



LSLLN
Lake Superior Living Labs Network

What is the Lake Superior Living Labs Network?

Our objectives

- **Support and strengthen** existing sustainability related teaching, research and action initiatives on local, regional and watershed scales
- **Connect** three hubs
- **Strengthen existing partnerships** between academic and community-based organizations
- **Establish** new collaborative projects
- **Ensure equitable and meaningful** long-term partnerships
- **Experiment** with tools and processes for learning and working together

*Learning
by
doing*

roots to harvest



LU Labyrinth



Seed Savers



Rain Garden demonstration site



Food bank Farm



Solar Commons

Supporting and learning from living labs projects within our hubs and moving toward development of living lab projects across the watershed

What is a Scoping Review?

- “Scoping reviews are used to **identify knowledge gaps**, set research agendas, and identify implications for decision-making. Scoping reviews are used to **present a broad overview of the evidence pertaining to a topic**, irrespective of study quality, and are useful when **examining areas that are emerging**, to clarify key concepts and identify gaps. For example, scoping reviews can be used to identify a topic area for a future systematic review. Scoping reviews can be seen as a hypothesis-generating exercise, while systematic reviews can be hypothesis-testing” (Tricco et al, 2016).
- “Rather than being guided by a highly focused research question that lends itself to searching for particular study designs (as might be the case in a systematic review), the scoping study method is guided by a requirement to identify **all relevant literature** regardless of study design” (Arskey and O’Malley, 2005, p. 22).
- “Scoping reviews are **exploratory projects** that systematically map the literature available on a topic, identifying the key concepts, theories, sources of evidence, and **gaps in the research**” (Levac et al, 2010).
- “Scoping studies are concerned with contextualizing knowledge in terms of **identifying the current state of understanding**; identifying the sorts of things we know and do not know; and then setting this within policy and practice contexts” (Anderson et al, 2008).

Why choose scoping review method?

- There are four reasons why one might choose to do a scoping review (instead of using another method) (Arskey & O'Malley, 2006, p. 21):
 - To examine the extent, range and nature of research activity
 - To determine the value of undertaking a full systematic review
 - To summarize and disseminate research findings
 - To identify research gaps in the existing literature

Why choose scoping review method?

Differences between systematic and scoping reviews

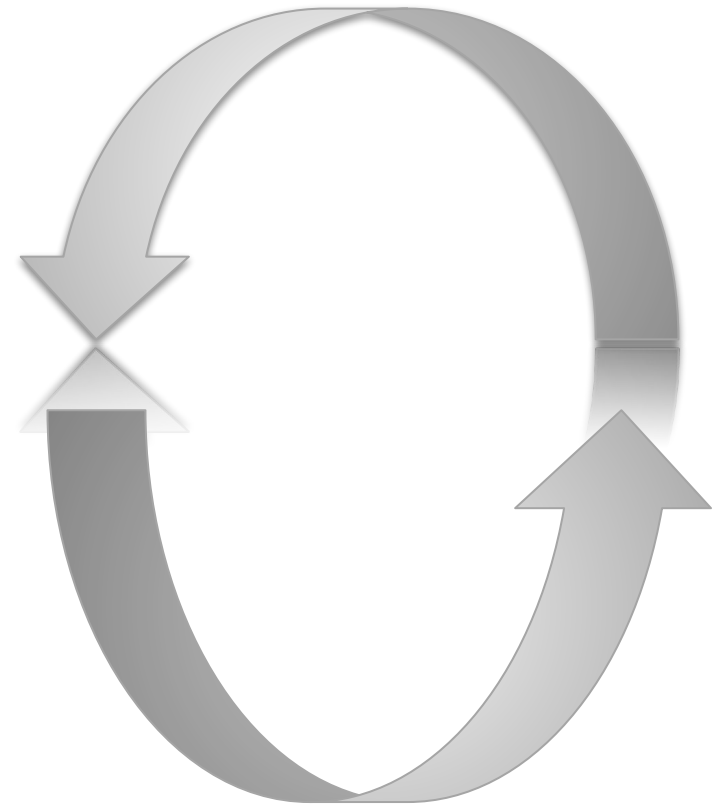
Scoping studies differ from systematic reviews in several ways:

	Scoping review	Systematic review
Research question	Broadly defined	Highly focused
Inclusion/Exclusion criteria	Developed post hoc at study selection stage	Developed at protocol stage
Study selection	All study types	Defined study types
Data extraction	"Charts" data according to key issues, themes, etc.	Synthesizes & aggregates findings



How to conduct a scoping review:

“The process is not linear but iterative, requiring researchers to engage with each stage in a reflexive way and, where necessary, repeat steps to ensure that the literature is covered in a comprehensive way” (Arskey and O’Malley, 2005, p. 22).



How to conduct a scoping review:

- Importantly, “consultation” is done throughout the review process to inform the study and to validate findings.
- There are five stages for conducting a scoping study (Arskey & O’Malley, 2006, p. 22): :
 - Stage 1: Identifying the research question to guide to review
 - Stage 2: Identifying relevant studies
 - Stage 3: Study selection
 - Stage 4: Charting the data
 - Stage 5: Collating, summarizing and reporting the results

Example Scoping Review



Article

Mapping the Solastalgia Literature: A Scoping Review Study

Lindsay P. Galway ^{1,*}, Thomas Beery ^{2,3}, Kelsey Jones-Casey ⁴ and Kirsti Tasala ¹

¹ Department of Health Sciences, Lakehead University, Thunder Bay, ON P7B 5E1, Canada

² Faculty for Natural Sciences, Kristianstad University, 291 88 Kristianstad, Sweden

³ Faculty for Teacher Training, Kristianstad University, 291 88 Kristianstad, Sweden

⁴ Weave Collaborative, Duluth, MN 55805, USA

* Correspondence: lgalway@lakeheadu.ca; Tel.: +1-807-766-7280

Received: 3 July 2019; Accepted: 22 July 2019; Published: 25 July 2019



Abstract: Solastalgia is a relatively new concept for understanding the links between human and ecosystem health, specifically, the cumulative impacts of climatic and environmental change on mental, emotional, and spiritual health. Given the speed and scale of climate change alongside biodiversity loss, pollution, deforestation, unbridled resource extraction, and other environmental challenges, more and more people will experience solastalgia. This study reviewed 15 years of scholarly literature on solastalgia using a scoping review process. Our goal was to advance conceptual clarity, synthesize the literature, and identify priorities for future research. Four specific questions guided the review process: (1) How is solastalgia conceptualized and applied in the literature?; (2) How is solastalgia experienced and measured in the literature?; (3) How is ‘place’ understood in the solastalgia literature?; and (4) Does the current body of literature on solastalgia engage with Indigenous worldviews and experiences? Overall, we find there is a need for additional research employing diverse methodologies, across a greater diversity of people and places, and conducted in collaboration with affected populations and potential knowledge, alongside greater attention to the practical implications and applications of solastalgia research. We also call for continued efforts to advance conceptual clarity and theoretical foundations. Key outcomes of this study include our use of the landscape construct in relation to solastalgia and a call to better understand Indigenous peoples’ lived experiences of landscape transformation and degradation in the context of historical traumas.

Keywords: solastalgia; mental health; emotional health; place; climate change; environmental change; landscape

Our Scoping Review

Using the scoping review method to better understand living labs

- What we currently know about living labs so far comes from our personal experiences in experiential learning and campus-community partnerships, learning from partners in our network, and a review of the literature.
- But there's so much more we want to understand! And we're planning to use the scoping review process to guide and support our collective learning and our work together in the future. A more rigorous process...

The Scoping Review Process To-Date:



Stage 1: Identify the Purpose of the Study and Preliminary Research Question



Stage 2: Identifying relevant studies

Stage 3: Study selection

This will involve developing “inclusion and exclusion” criteria.

Stage 4: Charting the data

Stage 5: Collating, summarizing and reporting the results



consultation
with network
to inform
research
questions,
and validate
findings from
the review
process



The Scoping Review Process To-Date:

Stage 1: Identify the Purpose of the Study and Preliminary Research Questions

- How are Living Labs currently conceptualized, used, and governed?
- What tools and processes are used to support co-creation, collective learning, and collaboration?
- How is equity integrated into Living Labs work?



The Scoping Review Process To-Date:

Stage 2: Identify Relevant Studies

70	11/20/2019	ScienceDirect	Find articles with these terms “living lab*” and sustainability	Years: 2005-2020	575	
71	11/20/2019	ScienceDirect	Title, Abstract, Keywords: “living lab*” Find articles with these terms: sustainability	Years: 2005-2020	NO RESULTS	
72	11/20/2019	ScienceDirect	Title, Abstract, Keywords: Find articles with these terms: “living lab*” and “sustainab*”	Years: 2005-2020	1	Soini, K. et al. (2018) Universities responding to the call for sustainability: A typology of sustainability centres. Journal of Cleaner Production.
73	11/20/2019	Web of Science	Advanced Search: (TS=”living lab*) AND (TS=sustainab*)		223	
73	11/20/2019	Web of Science	Advanced Search: (TS=”living lab*) AND (TS=sustainab*)	Years: 2005-2020	221	

The Scoping Review Process To-Date: Consultation with Network



LSSLN
Lake Superior Living Labs Network

Ongoing Work: Consultation with network to inform research questions and validate findings from the research process.

Some of our preliminary questions about Living Labs:



Preliminary Scoping Review Questions...

1. How are Living Labs currently conceptualized, used, and governed?
2. What tools and processes are used to support co-creation, collective learning, and collaboration?
3. How is equity integrated into Living Labs work?

...but we also want to hear from you about what you're interested in learning.



Discussion Questions

*** Kindly have someone in the group take notes on what you discuss. Break-out groups will report back to the larger group, and the notes will be shared with everyone after the meeting. You'll have 35 minutes to discuss in your break-out groups, and we have 30 minutes for reporting back to the large group***

Discussion Questions:

1. Question from David and Randy: What about related/parallel concepts and their inclusion in the review?
2. Living Labs center learning/experimentation, co-creation and collaboration. Are there questions that you have about the challenge you're working to solve that could be answered through collaboration within the LSLLN? In your case, what would be the best way to facilitate this kind of collaboration and co-creation of knowledge/action?
3. What does the term "living lab" mean to you?
4. What are three key characteristics of a living lab project?
5. Is there anything you don't understand about Living Labs?
6. **What would you like to learn from the scoping review process (what would help to advance your work)?**
7. **Which of the following preliminary scoping review questions is most relevant to you and your work?**
 - a. How are Living Labs used?
 - b. How are Living Labs governed?
 - c. How is equity and justice integrated into Living Labs work?
 - d. What tools and processes are used to facilitate collaboration and co-creation within living labs?



Large Group Report-Back

Discussion Questions:

1. Question from David and Randy: What about related/parallel concepts and their inclusion in the review?
2. Living Labs center learning/experimentation, co-creation and collaboration. Are there questions that you have about the challenge you're working to solve that could be answered through collaboration within the LSSLN? In your case, what would be the best way to facilitate this kind of collaboration and co-creation of knowledge/action?
3. What does the term "living lab" mean to you?
4. What are three key characteristics of a living lab project?
5. Is there anything you don't understand about Living Labs?
6. **What would you like to learn from the scoping review process (what would help to advance your work)?**
7. **Which of the following preliminary scoping review questions is most relevant to you and your work?**
 - a. How are Living Labs used?
 - b. How are Living Labs governed?
 - c. How is equity and justice integrated into Living Labs work?
 - d. What tools and processes are used to facilitate collaboration and co-creation within living labs?