Meeting Summary – Indicator Gathering

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Overview

On April 19-20, 2019, the Center for Biodiversity and Conservation (CBC) at the American Museum of Natural History, in collaboration with the Center for the Support of Indigenous Peoples of the North and other partners, convened a small practitioner gathering for deeper exploration of indicators related to connections between and across people and place in Indigenous Peoples and local communities (IPLCs). The CBC facilitated the in-depth exploration together with approximately 20 IPLC members—including practitioners from Russia, Central Asia, North America, Central America, and the Pacific Islands—who have developed indicators on the connections between people and place within place-based initiatives and/or who are actively exploring ways to demonstrate the importance of such indicators within the management and policy arena. Through an interactive, discussion-focused format including large group exchange and small group work, participants shared their perspectives and lessons learned using linked biological and cultural indicators in monitoring and reporting for Indigenous and/or community-led biodiversity conservation efforts.

The Indicator Gathering builds on discussions from the [April 2018 meeting of the Action Group on Knowledge Systems and Indicators of Well-being](#) and is also timely as it coincides with the 2019 International Year of Indigenous Languages, which celebrates Indigenous languages around the world and raises global attention on their significance for sustainable development, reconciliation, good governance, and peacebuilding.

Group discussions focused on ways Indigenous and local community worldviews, conceptions of well-being, and locally-defined measures of success can serve as the foundation for community planning, sustainable development, and related policy (for instance the UN Declaration of the Rights of Indigenous Peoples). Pre-meeting survey responses in combination with group discussions on Day 1 fed into in a list of overarching commonalities or themes central to consider in discussions on connections between and across people and place—including topics such as Self-determination and Autonomy, Land Rights and Access, Rights and Responsibilities, Holistic Health, and Collective Self. These and other commonalities are described in more detail in [Appendix II](#). It should be noted that as discussions took place over two short days, this list should not be considered exhaustive, but rather may be a developmental starting point of which future planning, indicators, and eventual baselines can be established. We anticipate that these commonalities will be a strong foundation for any group interested in working on the topic of connections between and across people and place; or for institutions wishing to engage with communities that prioritize the concept of connections between and across people and place, as is the case in many IPLCs.

Day 2 focused on small group discussions that facilitated a series of resources, templates, and models, to illustrate and articulate the importance of connections between and across people and place. These spanned multiple decision-making scales and included specific examples when possible. A total of five groups worked on products including an evaluation of the International Year of Indigenous Languages, a deeper-dive exploration of indicators within the themes of Land Rights/Access, Autonomy/Self-Determination, and Holistic Well-being (the latter working on a series of conceptual models and frameworks), and discussions on the strategic development of an Indigenous/Traditional Knowledge Learning Center in Central Asia. Group products including brief descriptions and future plans are outlined in [Appendix III-VII](#). Several products initiated at this gathering feed into existing pathways for action (for instance the International Year of Indigenous Languages evaluation) and others (for instance the three conceptual diagrams) can serve as useful resources for groups/institutions wishing to further explore the concept of connections between and across people and place.

The gathering provided critical opportunities for peer-to-peer learning including discussing challenges and solutions in advancing indicator development and use in policy/management. The commonalities, key takeaways, and emerging indicators that resulted from this gathering build on previous efforts led or co-led by the CBC including the 2018 Action Group meeting by providing more depth—in particular through cross-regional commonalities, place-based examples, and tools/resources. Ultimately, these findings provide key examples and potential indicators useful to inform efforts to support the links between biological and cultural diversity, the links between nature and culture, and the reciprocal connections between and across people and place.

Background/Premise

Across the globe, Indigenous Peoples and local communities have been involved in various initiatives to track local-level, holistic, and ecosystem-based approaches to resource management and sustainability. These initiatives have revealed a critical need to support the development of place-based, culturally relevant indicators that can be used to manage and monitor resources and effectively plan for the future at the local scale. Locally developed indicators build on Indigenous knowledge, local knowledge, wisdom, worldviews, and practices; they are practical, attuned to local ecology and cultures, and embody complex interactions between peoples and the places they inhabit. Indigenous and/or locally based knowledge and monitoring inform local resource management and understanding of the environment through philosophy, epistemology, and worldviews rooted in Indigenous knowledge, for instance acknowledging the fundamental importance of connections across the ecosystem (including humans) to inform holistic and ecosystem-based management strategies. If meaningfully represented in national and international policy, Indigenous knowledge and/or local knowledge can provide a basis for more informed and effective implementation through community-level engagement and ownership, but also carries important legal and political implications beyond the community-level for instance through the full and effective participation of Indigenous Peoples and nations as described in the UN Declaration of the Rights of Indigenous Peoples. In addition, and importantly, weaving Indigenous knowledge, local knowledge and Western-based scientific knowledge systems is a crucial step towards sustainability at multiple scales. Collaboration between local and international indicator initiatives can synergize cross-scale planning, systems and governance-focused evaluation, and evidence-based implementation for sustainability.

Meeting Goals and Objectives

Overarching Goals of the Gathering
· To examine indicators at the intersection of biological and cultural diversity, through the lens of place-based and language-based reciprocal interactions between humans and nature.
· To support meeting participants in sharing, comparing, and contrasting place-based indicators across community-based organizations and relevant decision-making scales.

Specific Objectives
· Identify a series of strong examples of the links between nature and culture, specifically in relation to connections between people and connections to place, that could be relevant for people around the world. This may include place-based perspectives on the importance of reciprocal human and environmental relationships, example indicators from place-based initiatives, and/or indicators that are relevant to broader international processes, such as the Convention on Biological Diversity.
· Drawing from existing work and new examples, identify themes, patterns, and emergent properties of indicators on the connections to people and place, relevant to place-based communities.
· Discuss challenges related to the current state of indicator development and use in policy/management to identify future opportunities and inform future actions.
· To address these challenges and gaps, identify and begin to synthesize a series of resources intended to mainstream the connections between nature and culture, people and place, for diverse audiences across multiple governance scales. This may include, but is not limited to, a guidance document for high-level organizations looking to integrate locally-relevant indicators into their monitoring and evaluation programs, art-based print media for IPLC youth, and other useful tools/materials for local indicator application.

Commonalities/Themes Discussed

Recognizing that self-determined goals and visions may vary across Indigenous communities, based on discussions at the Indicator Gathering we have identified a preliminary set of commonalities (or themes) that resonate across groups when exchanging perspectives on Indigenous community well-being and resilience. The Indicator Gathering provided an important opportunity to conceptualize the early stages of this framework together with our IPLC collaborators, including its structure, corresponding content, and potential indicators; however there is strong interest in additional refinement in the near future.

This set of commonalities was distilled from pre-meeting responses on measures of the connections between and across people and place, and then further refined over the course of the Indicator Gathering. See Appendix II for a table of expanded descriptions and potential indicators.

Youth/Intergenerational Engagement

Respect for Indigenous Peoples, Knowledge Systems, and Lifestyles

Rights and Responsibilities

Humans part of the ecosystem/Reciprocity with Non-human Kin

Land Rights and Access

Indigenous Languages

Core focus on Self-determination and Autonomy

Suites of Interconnected Indicators

Culture-based Education

Collective Self

Interacting with other governments

Indigenous-informed Governance/Resource Management

Holistic Health

Role of Women

Key Takeaways

- **The central role of land rights, access, autonomy, self determination, and sovereignty:**
  Participants described these as critical enabling factors of connections between and across people and place, with high relevance to IPLCs across diverse geographic areas and equally diverse decision-making contexts and governance structures. Several participants described this theme as working toward "making our own decisions with knowledge we choose and our own values."

- **The importance of culturally responsive and culture-based education:**
  Participants noted the importance of having various educational pathways to pass on place-based teaching as well as the importance of mechanisms to evaluate externally-driven educational systems toward administrative and operational pathways that stem from Indigenous perspectives.

- **The concept of collective self-sufficiency (as opposed to individual gain):**
  Participants noted that IPLC communities tend to prioritize collective success, health, and well-being over individual gain, contrary to current global metrics of success that emphasize individual benefits.

- **Using qualitative measures in combination with quantitative measures:**
  Participants explained that while being able to quantify a metric is important, equally (if not more) important is characterizing both the context and the quality of that measure. For instance, counting the number of gatherings held in conjunction with the International Year of Indigenous Languages can be interesting; however, perhaps more important is describing who was represented at the gatherings, how the gatherings were perceived by attendees, and whether the gatherings facilitated meaningful exchange, established long-term relationships, and influenced subsequent action.

- **Representing systems using suites of indicators:**
  Typical indicators of biological or ecological health focus on one specific trait, for instance using percentage of fat content or population size as a measure of walrus health or species status. However Indigenous knowledge builds on multi-faceted connections across natural, biological, and physical systems - where the health of the walrus and the health of the hunter are interconnected. From the Inuit perspective, understanding the health of the system (inclusive of both walrus and humans) requires multiple pieces, such as texture, color, smell, and taste of the walrus' fat, the walrus' tusk color (indicative of diet) as well as its stomach contents, its behavior with other walruses and other species, and the importance of an Inuk's relationship to the walrus, their first catch, and providing that catch to an elder. It is also important to evaluate place-based observations over seasons and over time, for instance how salty is the water, what direction are the winds coming from, how thick is the sea ice, what are other animals doing?

- **The importance of efforts "for and by" Indigenous Peoples:**
  The UN Declaration of the Rights of Indigenous Peoples promotes the full and effective participation of Indigenous Peoples in all matters that concern them. This gathering reaffirmed the importance of Indigenous-led efforts to address the deep institutional and systemic challenges experienced by IPLCs. Research, programming, evaluation, and policy often provide the basis and evidence for decision-making, thus they must include Indigenous Peoples and local communities in a substantive way from the beginning.

Emergent Indicators

- Recognition of the reciprocal links between physical, mental, spiritual, and emotional wellness (as an indicator of self-defined wellness, well-being, and success)

- Knowledge and application of successful rotational grazing methods informed by Indigenous knowledge (also an indicator of self-defined wellness, well-being, and success)

- Changing colonial place names back to customary cultural names (as an indicator of self-determination through asserting Indigenous identity)

- Developing language-related legislation, language advisory boards (as an indicator that Indigenous language is a high priority and taken seriously)

- Growing number of new speakers of an Indigenous language (as a quantitative indicator of the language programs and/or intergenerational knowledge transmission being effectively supported and implemented)

- Presence of community-conserved areas or community co-management of natural parks and reserves (as an indicator of sustainable nature management programs)

- Community-level perceptions on the quality of Indigenous engagement/participation in co-management areas (as a qualitative indicator of sustainable nature management programs)

- Presence of opportunities to share stories with decision-makers (as an indicator of interacting with other governments on a nation-to-nation level)

- Trend in criminalization of Indigenous leaders of a particular area for protests and other forms of demonstration in support of land and other rights (as an indicator of correlated trends in land rights discourse in that area)

Group Work

Participants conducted small group work on Day 2 to advance a series of resources or products that demonstrate the connections between and across people and place (in line with one of the specific objectives of this gathering). The results of their group work are described below.

A. **Indicators for Land Rights/Access and Autonomy/Self-Determination**
    One of the breakout groups conducted a deeper-dive exploration into indicators for Land Rights/Access and Autonomy/Self-Determination. An expanded list of indicators and takeaways from that group is included in Appendix III. Through this discussion, participants noted that land rights, access, autonomy, and self-determination are threatened by dominant governments and/or cultures. An indicator of IPLC land rights/access and self-determination is being able to "live our way of life and [make] decisions using our knowledge that we choose, and our own cultural values". Additionally, an indicator of movement in this direction is the "recognition of our views of 'territory' (land, air, water, ice) - that humans are part of the ecosystem". While many indicators were listed through this discussion, group members noted that it would be beneficial to further this discussion with other Indigenous Peoples. This resource was developed among three participants of the Indicator Gathering. In its current iteration, general audiences are welcome to draw inspiration from this resource with the understanding that this product resulted from a short discussion among three people. See Appendix III for more on products from this working group.

B. **Indigenous Wellness Model**
    One breakout group developed a conceptual diagram to explore the components of an Indigenous Wellness Model—a community-centered tool rooted in Indigenous creation stories intertwining environmental, physical, mental, spiritual, and emotional well-being for community planning, implementation, evaluation, and dissemination. The authors of this product will conduct a pilot in Summer 2019 as an example of how to apply it in a local context, for instance with Native American high school students in Nevada, or during intergenerational community-based camps within Native Hawaiian communities in Hawai'i. Ultimately the group intends to develop a short co-facilitators guide and will provide examples of how this tool can be used by Indigenous groups according to their respective knowledge systems and communities. See Appendix IV for more on products from this working group.

C. **Indigenous/Traditional Knowledge Learning Center**
    Based on initial discussions in Day 1 (see Appendix VII, Figure 12), the group focusing on the development of an Indigenous/Traditional Knowledge Learning Center (ITKLC) developed a 2-page Strategic Model as well as a 1-page schematic diagram, both of which are intended as guides for communities interested in establishing such an organization. The ITKLC is intended to serve as a Knowledge Hub for providing and developing information and knowledge between different traditional/Indigenous communities, state authorities, national authorities, and research and academic communities at the country and international levels. The Center is proposed to collate best practices/case studies and practical experiences to share with interested stakeholders. The group developed a schematic diagram describing the connections between TK and Science and how they will contribute and advocate for TK on a policy level. The Group will continue to develop and share the strategic model of the Center with identified actors to encourage additional use at local, regional, and international scales, keeping in mind existing related efforts such as the Indigenous and Local Knowledge Centres of Distinctions, launched at IPBES-4 in 2016. The Institute for Sustainable Development Strategy' Public Fund (Kyrgyzstan) has already started working on the model (primarily on TK documentation) and will continue to advance this work. See Appendix V for more on products from this working group.

D. Collective Well-being and Kinship with Nature

Small group discussions on events that impact connections between people and place identified displacement and other forms of physical disconnection as immediate issues that cause cascading impacts on human physical, spiritual, mental, and emotional well-being. Participants identified patterns and trends, drivers and structures, and values and worldviews tied to these events and concluded that one possible solution is to find ways to articulate the critical components of collective well-being from Indigenous perspectives. These critical components also happened to be the enabling factors that contribute to kinship with nature. Group members selected the imagery of a snail shell or unfurling fern to represent the slow, deliverable, and thoughtful process necessarily to support the enabling conditions. The final product is intended as a printed postcard depicting the fern imagery plus a description and would include a link to a website for example measures tied to each enabling factor. See Appendix VI for more on products from this working group.

E. International Year of Indigenous Languages Evaluation

The subgroup on the International Year of Indigenous Languages (IYIL) focused on thinking about the outcomes of the IYIL that could be considered effective by Indigenous communities and that should be advocated for during the 2019 UN Permenant Forum on Indigenous Issues (UNPFII). The importance of Indigenous languages for the sustainability of our planet is reflected in many documents such as UNDRIP, the Convention on Biological Diversity, the UN Forum on Climate Change Conference, and the Sustainable Development Goals. However, there remains a long way to go in some countries towards true and honest recognition of Indigenous languages as viable and important repositories of environmental knowledge. Therefore, fostering language programs that aim not just at language documentation and formalization, but also at language development through the Indigenous vision and community-run initiatives.

As UNESCO is taking the lead in the IYIL, the subgroup looked into the UNESCO's Program of Work and ongoing language assessment for 2019. This review of UNESCO's online materials identified a lack of an Indigenous vision and community level engagement, as the current process focuses primarily on official languages and national level evaluation which often does not represent Indigenous voices. The members of the subgroup expressed their interest in initiating pilot community-run language evaluation field testing back at home that could be further integrated into the national evaluation reports and global language assessment.

Recognizing the need for IPLC contributions to the UNESCO assessment, the group proposed that UNESCO accept community feedback through a complementary community evaluation form. During the 2019 UNPFII, a representative of the group met with the UNESCO lead for the year to discuss these concerns. As an outcome, this representative was invited by UNESCO to be an official contributor to the IYIL Outcome Report and will provide substantive feedback on the report. The UNESCO lead clarified that the national level assessment process is currently in phase 1, while phase 2 would be conducted with universities and academic institutions, and phase 3 would be open for community engagement. UNESCO encourages IPLCs wishing to participate in the process to contribute to the final phase of the UNESCO assessment. See Appendix VIII, Figure 13 for detailed notes from the working group.

Feedback and Outcomes

The following section highlights selected participant feedback and self-described outcomes based on the activities and discussions at the April 2019 Indicator Gathering. At this gathering we made significant progress on our overarching meetings goals and specific objectives. The selected responses below highlight ways we advanced toward our goals and/or areas of broader impact.

In response to the prompt: "The thing that most resonated with me today (Day 1) was... because..."

- The power of local stories and experiences as the main reference to create indicators.
- The focus on grounding our discussions on shared struggles, but more importantly, in our collective solutions based on positive examples of the relatives of our communities (youth, elders, hunters, fishermen, traditional values). Because it is a reminder that we have to define our own process and ideas/themes first rather than fitting it into a process that doesn't serve us.
- Commonalities because we are so diverse, as are our lands, yet our approaches and beliefs have very common tenets.
- That we can use indicators to support self-determination or that we are already doing this. Because we had not used the language "indicator" when talking about what self-determination looks like. This reorganizes the conversation in my brain.
- Indicators are fundamental to defend our rights and fundamental to think/look into the future. Because diversity but also commonalities are core of collective self-determination.
- The power of local stories and experiences as the main reference to create indicators.

In response to the prompt: "What was one thing that excited you in this meeting"

- Realizing that we're not alone in this fight for self-determination
- Hearing everyone's thoughts and perspectives; Learning from everyone; All of the discussions and connections; Being reminded of how close we all are in our ways of knowing and living; The facilitators – the facilitation was so flexible and supportive.
- Seeing land and origin stories come to life and be operational/concrete via Day 2 activities/frameworks/indicators/instruments. Thank you for pushing us to this.

In response to the prompt: "How will you do things differently as a result of this meeting?"

- I feel like I have a bigger voice and more resources to push forward in our work advocating for our people and place.
- I'll strengthen the construction of indicators in my local processes—encourage my cooperative to measure, evaluate, and design in our own ways indicators of well-being.
- As a result of this meeting, I will concentrate more on actions, based on indicators of well-being from Indigenous peoples' perspectives.

Next Steps

With permission from participants, the CBC has already begun to share the overarching takeaways from this gathering (including key themes, commonalities, and example indicators) through invited panelist remarks at Spring 2019 global policy gatherings such as the UNPFII side event on Biological and Cultural Diversity (New York, USA) as well as the Convention on Biological Diversity North American Dialogue (Montreal, Canada). Several global partners and collaborators have expressed high interest in the outcomes of this gathering. We will share this final report across our networks, and encourage others to do so as well.

In terms of the group work initiated at this gathering, several of the tools and conceptual frameworks will be piloted by the group authors over the next few months. With group permission, the CBC has started to share some of these examples with colleagues and collaborators interested in culturally-informed monitoring and reporting. We find these examples useful to visualize well-being through the lens of reciprocal relationships between and across people and place. Together, the tools are intended to provide inspiration for monitoring and evaluation processes that make sense in groups with different Indigenous perspectives and for groups interested in cross-scale (for instance site-based, regional, national, and global) monitoring and reporting structures. We will also continue to support the Indicator Gathering representative invited to contribute to the IYIL Outcome Report and look forward to additional outcomes from that process.

Meeting participants expressed high interest in virtual opportunities to continue the dialogue and exchange, for instance through email lists or through a social media group, both of which the CBC has developed for the Indicator Gathering participants. Virtual communication pathways like these will also be useful to share opportunities for individual or group contributions to ongoing global policy efforts such as the Convention on Biological Diversity's post-2020 agenda, or to identify future opportunities to convene in-person for instance at the 2020 UN Permanent Forum on Indigenous Issues.

Moving forward, the CBC organizers are also exploring future opportunities and resources to develop digital learning and sharing platforms to support a broad and diverse community of practice through virtual exchange. Beginning in Fall 2019, the CBC plans to organize and host a series of quarterly or biannual webinars (based on availability of resources), intended to provide a forum for learning and exchange among practitioners who are actively using or have interest in using place-based monitoring and reporting indicators on well-being or related social-ecological measures. The current vision for the webinar series is that in each webinar we will invite one or more place-based initiative(s) to share about their work and through an interactive exchange-focused format, we will share and compare concrete examples of and available resources on place-based indicators of well-being. We will work with our networks, including the 2018 Action Group and 2019 Indicator Gathering participants, to identify speakers and the final webinar schedule will be announced through these and related virtual learning platforms (i.e., the National Biodiversity Strategies and Action Plans (NBSAP) Forum). We will schedule webinars at a time that supports broad geographic participation; however, recordings will also be made available online at a subsequent date.

In addition, the CBC will upload publicly available resources shared by the Indicator Gathering participants to the Nature-Culture Indicators and Knowledge Systems Directory. Based on user feedback on this curated directory, the next step (again subject to resource availability) would be to develop a complementary Indicator Directory that will provide direct access to a range of indicator sets. To develop this resource, we would identify and synthesize across cases that describe indicators used to track well-being and resilience. We anticipate identifying critical dimensions and indicators of well-being and of resilient human and natural communities, where they are in use, by whom, and for what purpose, including available information on methods of measurement and implementation. The resulting directory would be searchable, allowing users to sort by criteria such as implementing organization, geographic locations, types of indicators, methods for gathering information, and other fields.

In closing, the CBC would like to acknowledge and extend our appreciation to all of the individuals and organizations who made this gathering possible. We are grateful to our participants for the gift of their thoughts and time and also very grateful to the supporting organizations who provided the resources necessary to bring these practitioners together, in particular the Christensen Fund, the Trust for Mutual Understanding, and Nia Tero. Thank you.

APPENDICES

Appendix I. Selected Pre-Meeting Survey Results

Figure 1. Regional representation

Central Asia	Central America	Russia	North America	Pacific Islands
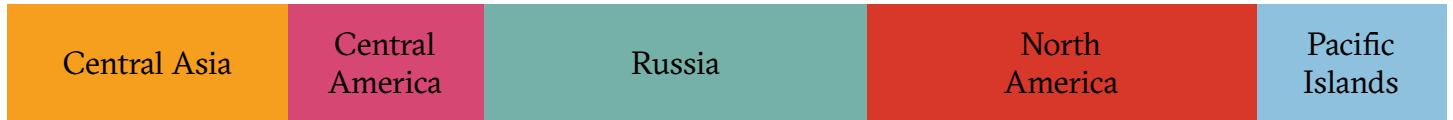
Figure 2. Organization-type representation (non-discrete groupings)

Research/Academic Organization

Tribal Business (Social Entrepreneur)

Non-government Organization	Tribal/Indigenous Group			

Indigenous Non-Government Organization

Donor
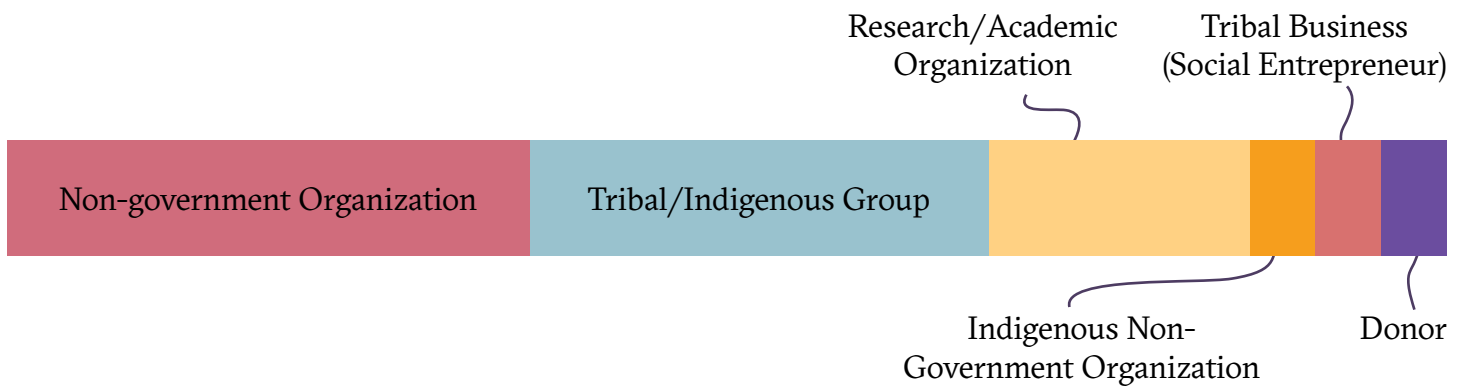
Figure 3. "Which scales are of most relevance to your work?"

	Regional	National	International	

Local
(family, community, tribe, or other appropriate socio-cultural unit)

Other
(Grass-root, Intercultural, global, and extent of UNDRIP)

0   7   14

Number of Responses
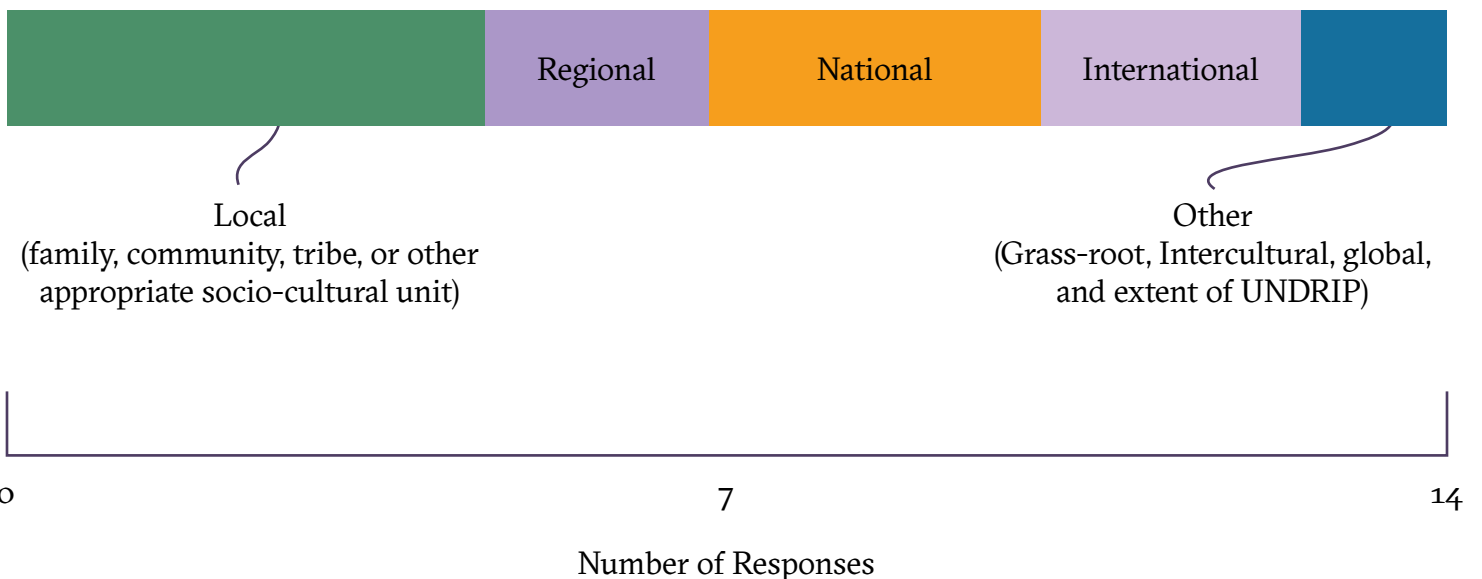
Figure 4. Conceptualized responses to the prompt "Describe your work on metrics that link nature and culture, specifically in relation to connections between people and connections to place."

Figure 5. Conceptualized responses to the prompt "What are examples of ways you describe, indicate, and/or monitor reciprocal interactions between people and connections to place in your efforts?"

Appendix II. Commonalities/Themes and Potential Indicators

The following list of commonalities and themes was distilled from pre-meeting responses on measures of the connections between and across people and place, further refined over the course of the Indicator Gathering. This list also incorporates examples shared during discussions over the course of the meeting, including a reflective session asking participants to describe the connections between and across people and place in their community, or in the Indigenous and local communities they work with.

Youth/ Intergenerational Engagement

Youth are present and active participants in processes such as place-based education on national/historical heritage.

- Do youth feel that they are a valued part of their community?
- Number of youth going outdoors to maintain relationships between people and nature
- Number of youth that share food with others
- Presence of local students working together with local communities to document local history and nature

Culture-based Education

An emphasis on culture-based, land-based learning can support cultural pride, confidence, identity, and well-being.

The Indigenous nation's citizens and families:
- Retell the story of significant land and water features of their respective territories in relation to the history and culture of the people
- Identify and act respectfully and responsibly in their interactions with the land and waters of their respective territories to promote well-being
- Spend more time involved in outdoor activities in the territory
- Gather as a community more, doing traditional harvesting, gathering and hunting pursuits

Indigenous Languages

Indigenous languages are repositories of knowledge that explain the sustainable mechanisms guiding life on earth.

- Recognition that language enables our understanding of the story behind cultural place names, highlighting the history and cultural contexts associated with a given location
- In the Menominee nation the term "autochthony" describes the Menominee's profound sense of place and connection to the land and is a central concept in Indigenous-based sustainability.
- Knowledge of Indigenous language names for traditional foods often convey relationships between humans and the environment that they are part of; the words tell us about the relationships between the animals, plants, and all that is around them; the words teach us sustainable practices used to prepare the foods:
  - In Yup'ik the term for "salmon" is *neqa*. Neqa also means "real food". The word demonstrates the strong relationship between people and salmon.
  - Preparing the traditional Itelmen food *silksilk* requires Indigenous and local knowledge of where, when, and how to properly harvest salmon, seal, and herbs. The name of the dish conveys pride and respect for the cook based on the effort to prepare and acquire ingredients.

Respect for Indigenous Peoples, Knowledge Systems, and Lifestyles

Respect, recognition, and protection for intellectual and other property rights of Indigenous and local communities are important under UNDRIP, but also through their own local and culturally-relevant recognition and implementation processes.

· Are communities empowered and supported to identify problems, monitor, document, and identify indicators, and develop adaptive resource management methodologies?
· Are there ways for Indigenous Peoples to promote their own lifestyles and practices?

Core focus on Self-determination and Autonomy

A core focus on autonomy ensures Indigenous and local communities are equipped with the resources necessary to advance toward self-determined futures. This can include self-determined economic opportunities, development rules and protocols, and food sovereignty priorities based on cultural values, theories, and methods informed by Indigenous knowledge systems.

· Presence of actions demonstrating "creativity against capitalism" for instance, gathering our own food, weaving our own clothes, promoting place-based education through ethnobotanical gardens
· Presence of Ecotourism opportunities
· Trend in the recognition of other economic outcomes of interacting with biological resources for livelihoods (for instance trading/sharing)
· Right/ability to use your own knowledge, your own way of life

Land Rights and Access

A rights-based focused is essential in IPLCs, in particular rights that support access to traditional, customary, and/or ancestral lands and waters necessary to support and maintain cultural practices. The absence of rights to land and natural resources has many cascading impacts on well-being including impeding connections between and across people and place.

· Number of co-managed areas/ Indigenous Community Conserved Areas (ICCAs)/ Indigenous-led areas AND presence of Indigenous agreement that an area is indeed co-managed
· Presence of access to sufficient quality and quantity of water (as defined by IPLCs) in both Indigenous protected areas and non-Indigenous protected areas
· Access to traditional lands (fundamental)
· Trend in ability to maintain relationships with land, water, animals on one's traditional lands
· Access to Justice to support land rights and access
· Trend in criminalization of Indigenous leaders of a particular area for protests and other forms of demonstration in support of land and other rights (as an indicator of correlated trends in land rights discourse in that area)
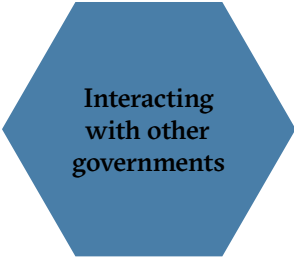
Rights and Responsibilities

While a rights-based approach is essential, Indigenous knowledge systems recognize the concept of rights is inexorably paired with associated responsibilities. This is also the case with rights and responsibilities surrounding connections between and across people and place.

· Presence of responsible leaders that carry projects through the process
· Availability of defenders for the protection of nature and traditional activities such as fishing, hunting, gathering, holding ceremonies and access to sacred sites.
· Trend in the perpetuation of cultural protocol before engaging in harvest practices, for instance designating the first catch as a spiritual offering.
· Presence of communities, families, or individuals that perpetuate customary responsibilities tied to a cultural practice - for instance, caring for fish schooling areas and/or reefs before and after harvest.

Interacting with other governments

The capacity to interact with other governments (including colonial powers) is essential. Capacity building can take place through sharing learnings with community and others during workshops and through advocacy by educating IPLC members to know and assert their rights and to know and protect the health of their respective territories.

- Community organizing (in defense of Indigenous rights)
- Nation-to-nation acknowledgement of treaty rights, memoranda of understanding for shared data, etc.
- Government-to-government negotiations and the presence of traditional/customary decision-making councils

Humans part of the ecosystem/ Reciprocity with Non-human Kin

The collective recognition of cosmological and genealogical connections between Indigenous Peoples, Mother Earth, and other non-human kin (i.e., plant and animal relations) resonate across Indigenous communities. In this context, lands, animals, and non-human elements (relatives) will indicate whether or not a system is healthy.

- The level of implementation and/or impact of policies that acknowledge relatives (natural elements) on equal standing as people
- When Selkup Indigenous (Tomsk) Peoples are carrying out any ceremony, or at the beginning of any celebration of Indigenous Peoples, the first drops of any liquid (water, juice, alcohol) and a small piece of food always fall on the ground or in the water. Only after that will the Indigenous Peoples start eating. This practice is connected to the Tomsk vision of the world and spirituality - first you feed mother earth, nature and the spirits, and only then you eat / drink yourself. Do all hunters and fishermen do this, entering the forest, or approaching the river?

Holistic Health

Culture-based healing practices connect spiritual, mental, and physical health with land and water interactions.
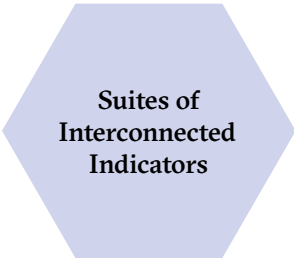
- The Purepecha term for "full life" is *Tsipekua* - a multidimensional way to describe complex interactions between happiness, health, creativity, and spirituality that allows people to connect with nature and for their cultures to seek a better life. It also conveys emotions such as affection, tenderness, love, sense of family, and kindness.
- Knowledge of medicinal plants – context-specific blend of traditional and scientific knowledge
- Presence of household health practices rooted in traditional medicine (across urban/rural scopes)
- Resurgence or maintenance of holistic and spiritual elements of traditional healing practices

Role of Women

Across cultures, women play an important role in enabling and maintaining connections between and across people and place.

- Knowledge and recognition of the role and relationships of women environmental rituals, celebrations, and everyday practices that links nature and culture in order to protect life.
- Knowledge of the use of plants and animals in women's health

Suites of Interconnected Indicators

IPLC perspectives do not view nature separate from people, thus suites of indicators are necessary to show a more holistic picture of well-being.

- Recognition of multi-faceted, multi-dimensional knowledge of species interactions supported through the Indigenous knowledge systems of hunters and other wild harvesters.

Indigenous-informed Governance/ Resource Management

Indigenous-led governance (as self-defined by Indigenous Peoples) can enable community cohesion and unity, self-determination, and self-governance.

· Use of traditional participatory methods in decision-making (for instance the term "*Kurultai*" in Kyrgyzstan pastoral communities)
· Presence of customary conflict resolution mechanisms embedded in Indigenous languages
· Knowledge and recognition of cultural sharing practices
· Increase in spirituality and cultural identity through documenting and revitalizing local sacred sites
· Documenting and using traditional knowledge and practices in pasture management and cattle breeding (rotational or seasonal use of pastures informed by Indigenous knowledge, use of traditional methods for livestock weight and feeding)

Collective Self

IPLC communities often prioritize community well-being and success rather than individual gain. Moreover, some communities do not possess the concept of individual profit/gain and instead focus on household, community, or other form of collective wellness.

· Presence of indicators relevant to community scale and not just individual

Appendix III. Group Work – Deep Dive on Indicators for Land Rights/Access and Autonomy/Self-Determination
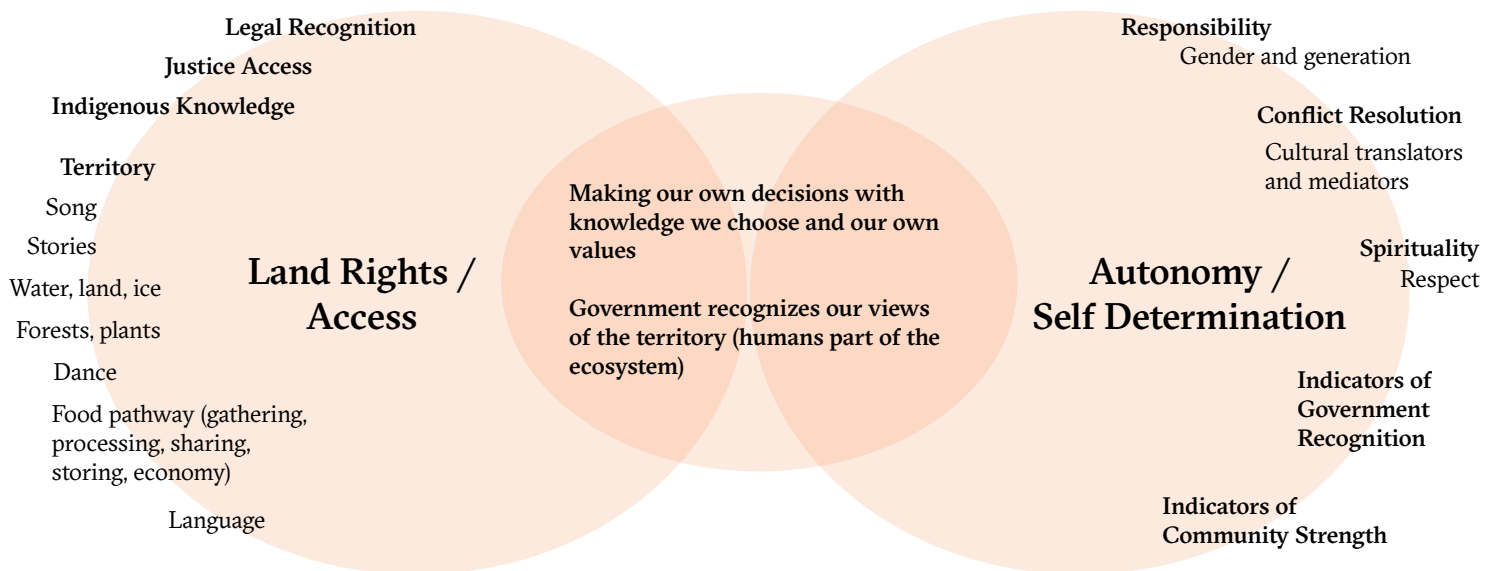
Legal Recognition

Justice Access

Indigenous Knowledge

Territory

Song

Stories

Water, land, ice

Forests, plants

Dance

Food pathway (gathering, processing, sharing, storing, economy)

Language

Land Rights / Access

Making our own decisions with knowledge we choose and our own values

Government recognizes our views of the territory (humans part of the ecosystem)

Autonomy / Self Determination

Responsibility

Gender and generation

Conflict Resolution

Cultural translators and mediators

Spirituality

Respect

Indicators of Government Recognition

Indicators of Community Strength

Figure 6. Visualization of the components of and overlap between Land Rights/ Access and Autonomy / Self Determination.

Group Members: Tatiana Amor, Tania Avalos, Carolina Behe

Indicators of Federal/State/Territorial government Recognition
· Does the dominating government support self determination?
· Does it implement UNDRIP?
· Do the Indigenous Peoples have equity with federal decisions?
· Is Indigenous Knowledge (IK) treated with equity?
· Do they understand what IK is?
· Is equitable funding allocated to be used the way that the IPS decide?
· Legal recognition
· Access to justice
· Knowledge of the laws and international instruments that will support IPS and our way of life

Indicators of IPs' communities - Strength and Self Determination
· Strong structure at the community level
· Continuous exercise to evaluate if we have self determination – it is a process
· Access to IK and to territory (cultural and naturally connected – all that is listed under territory)
· Collectively exercising our self-determination
· Knowledge of the laws and international instruments that will support IPS and our way of life
· We live our way of life
· Conflict resolution – are there cultural translators and mediators in our communities?
· Gender and generation participation
· Are we practicing respect
· Spiritual Celebration

Threats/challenges:
- Continuous exercise of evaluating if we have self-determination. It is always a process (challenge because it is not being done).
- Divide and Conquer
- User Conflict - economic system conflict of interests > megaprojects.
  - Environmentalists want to decide what to do with nature, so they made protected areas and denied us access.

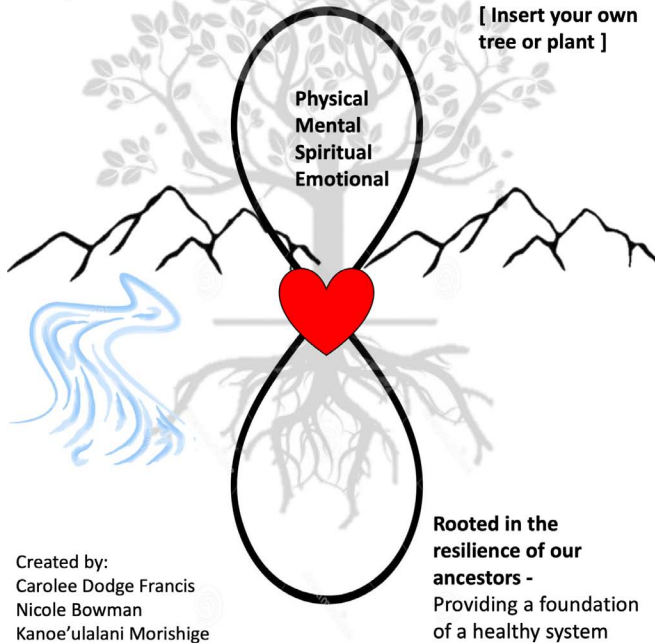**Potential pathways forward (ideas of what to do):**
- Ask states to support/evaluate implementation of UNDRIP. Find ways to make states accountable. Maybe with political/social pressure.
- Draft report to evaluate impacts from user conflict industry and environmental groups i.e. protected areas.
- Share resources on community structure, self-determination – stories of success, inspiration, challenges, tools
- Educate communities/law enforcers about national laws and international instruments.

Appendix IV. Group Work – Indigenous Wellness Model

Figures 7 and 8. Draft visualizations of the Indigenous Wellness Model to be piloted and refined over Summer 2019.

Indigenous Wellness Model
Created by: Carolee Dodge Francis, Nicole Bowman, Kanoeʻulalani Morishige

Product Description:
This Indigenous wellness model is a community-centered activity rooted in Indigenous creation stories intertwining environmental, physical, mental, spiritual, and emotional well-being for community planning, implementation, evaluation, and dissemination.

Moving Forward:
· Pilot activity – Carolee, Leslee, Kanoe
  · Product will be an example of using this model to create examples of how to apply in a local context

Sharing Permissions:
A working version of this product has been included here to describe progress made at the April 2019 Indicator Gathering. As piloting and refinement is pending, additional use beyond the Indicator Gathering participants requires express permission from the authors.

Conceptual Framework:

- **Planning: Use it to gather knowledge about how people understand their world. What are their perceptions in and about the natural world?**
  - Community asset mapping/needs assessment tool
  - Environmental community strategic planning
    - e.g. local development plan
  - Pre/post for have we improved the environmental (e.g. river, land) health?
    - Linking restoring the health of environment to the health of individual/family/community
    - Internal learning/growth as a result of improving the health of our environment and relationships to the environment
  - Youth resilience measure instead of risk factors. This would serve as an Indigenous resiliency instrument.
- **Implement: The results of planning and using the tool lends itself to programming, curriculum, etc. Whole component of intergenerational trauma, water, land, physical, mental, emotional, spiritual health. What is important to them in order to support healing and wellness?**
  - What programs are we missing?
- **Evaluate: Illustrates progress towards sustainability planning. Instrument for pre- and post- evaluation creating indicators.**
- **Disseminate: Touch screen/website to click for communities to learn and interact with different contextualized teachings and stories across Indigenous populations.**
  - Elder teachings, other Indigenous communities
  - How do communities understand the health of the waterways?
  - Literature Resources uploaded through tagging in case its tied to local ethical standard or cultural protocols, tribal IRBs, UNDRIP
- Create a one-page co-facilitators guide and give examples of how you use it

Appendix V. Group Work – Indigenous/Traditional Knowledge Learning Center

Group members:
· Alibek Otabekov, The Christensen Fund, Central Asia
· Leslee White-eye, First Nations with Schools Collective, Ontario, Canada
· Anara Alymkulova, Institute for Sustainable Development Strategy (ISDS), Kyrgyzstan
· Pavel Sulyandziga, Center for Support of Indigenous Peoples of the North, Russia
· Vera Solovyeva, from Russia, attending George Mason University

Our group worked on the Model/Concept of Indigenous/Traditional Knowledge Learning Center (ITKLC). The ITKLC is proposed to play as a knowledge base/Hub for providing and developing information and knowledge between different traditional/Indigenous communities, state authorities, national authorities, and research and academic communities at the country and international levels.

The Center is proposed to collate best practices/case studies and practical experiences to share with interested stakeholders. The Group will continue to develop and share the strategic model of the Center with identified actors and will use for its multiplication on a local/regional and international levels. ISDS has already started working on the model (primarily on TK documentation) and will continue this work further.
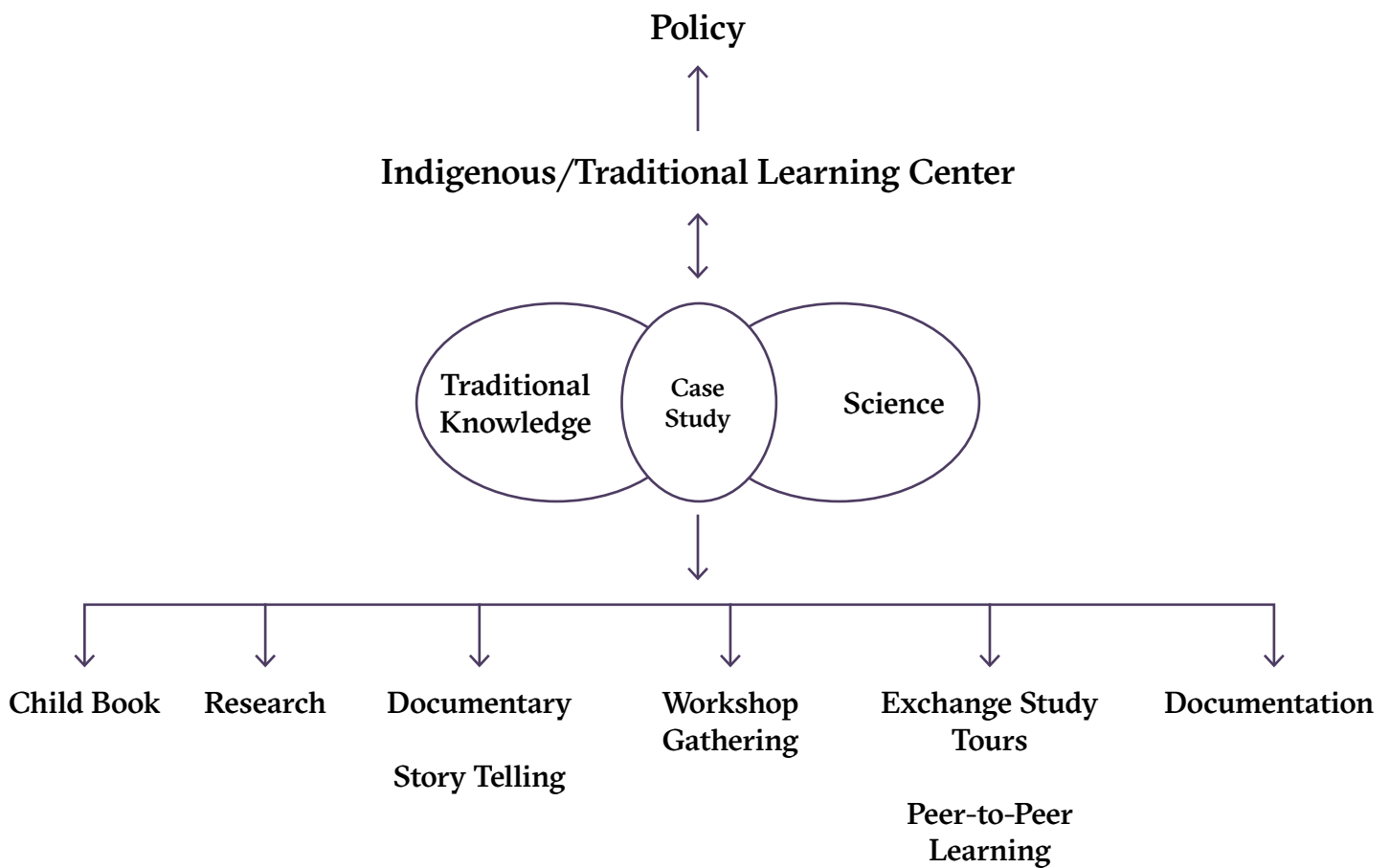

Figure 9. Connections between Indigenous/Traditional Knowledge and Science and how they will contribute and advocate for TK on a policy level.

Strategic Model for the Development of a Traditional Knowledge Center

Why?
- Amplifying strategic long-term planning
- Impact policy at national level to include traditional knowledge
- Education of next generation

How?
- Collect traditional knowledge
- Develop case studies
- Create international network
- Consolidate information to provide to policy makers
- Disseminate information
- Research
- Workshop gatherings
- Experiential learning (outdoors, in nature, using Indigenous ways of learning

Where?
- Government
- Private sector
- State agencies (ministry of environment, ministry of agriculture, ministry of education)
- Virtuel centre
- Community
- Outdoor/environment

What?
- Well-being indicators
- Climate change adaptation
- Capacity building
- Evaluation
- Peer-to-peer learning
- Role of technology

Who?
- Community development practitioners
- Researchers
- Students
- International students
- Families
- National networks
- Community stewards
- Community knowledge keepers

Policy
|
Indigenous/Traditional Learning Center
|
TK   **Case Study**   **Science**
|
Fieldwork/Direction

Fieldwork/Direction:
- Children books
- Research
- Documentary storytelling
- Workshop gatherings
- Exchange study tours

Appendix VI. Group Work – Collective Well-being and Kinship with Nature

Figure 10. Draft visualization of the factors and enabling conditions that contribute to collective well-being and kinship with nature.
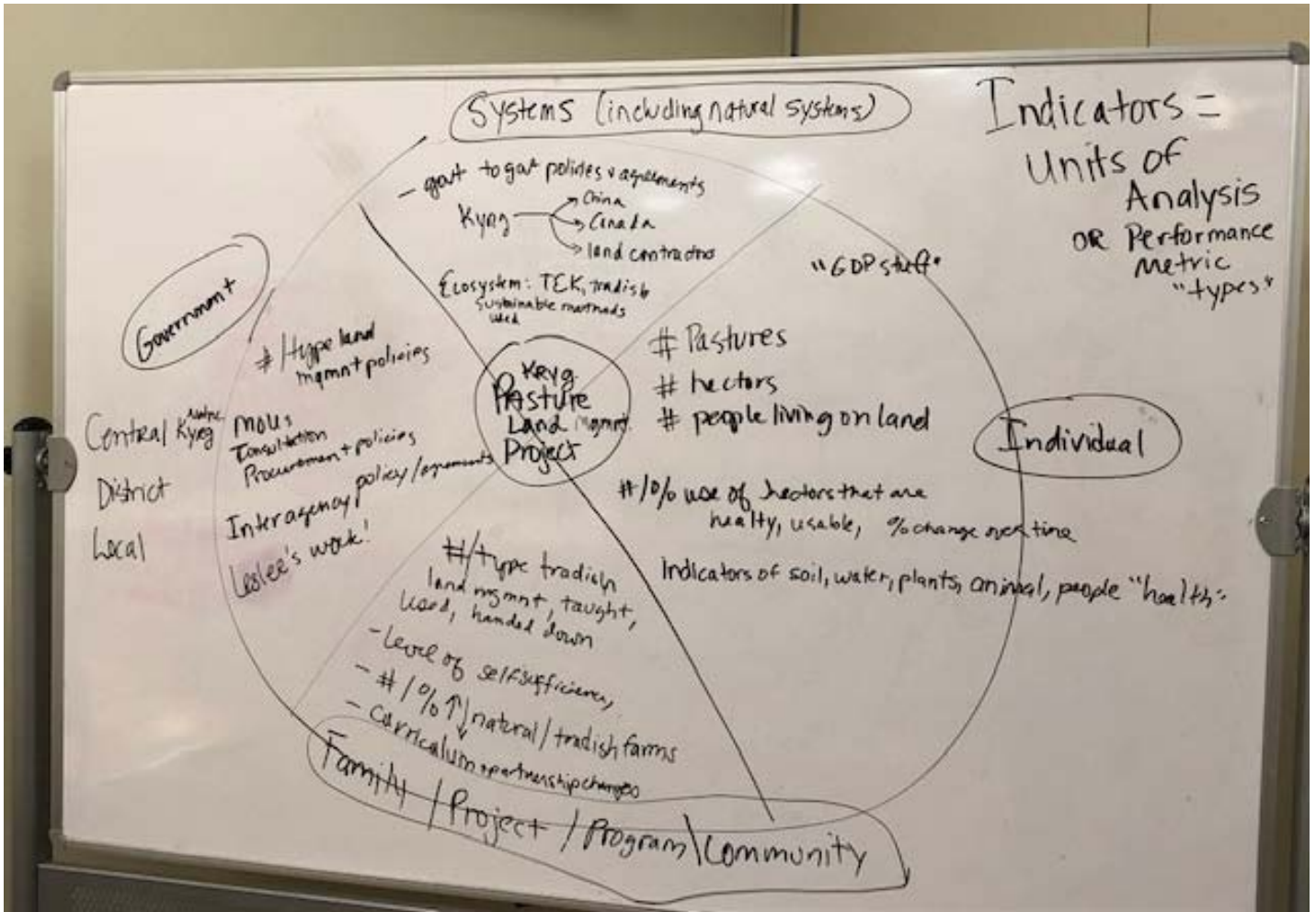
Appendix VII. Day 1 Discussions

Figure 11. Small-group exploration of Indicator Units of Analysis or Performance Metric "Types" incorporating example indicators from a Kyrgyzstan Pasture Land Management Project.
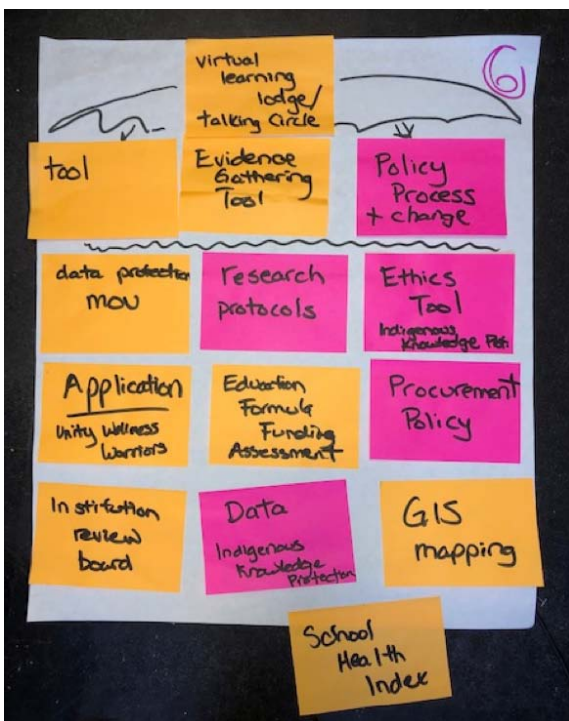

Figure 12. Small-group exploration of the components necessary to create and support a Virtual Learning Lodge/Talking Circle.

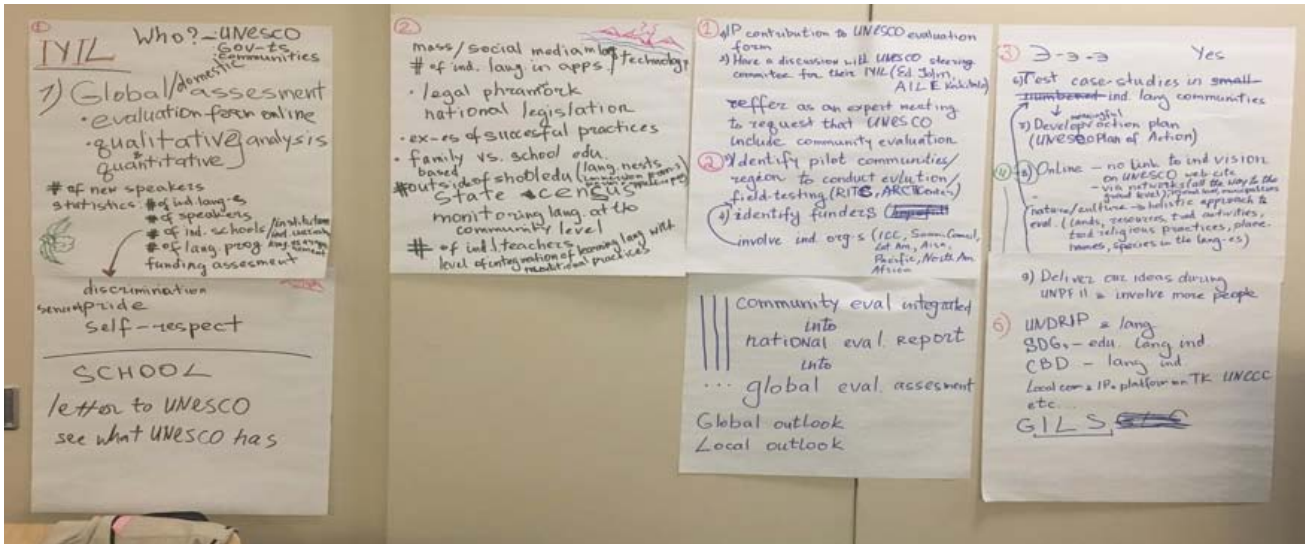# Appendix VIII. Day 2 Discussions

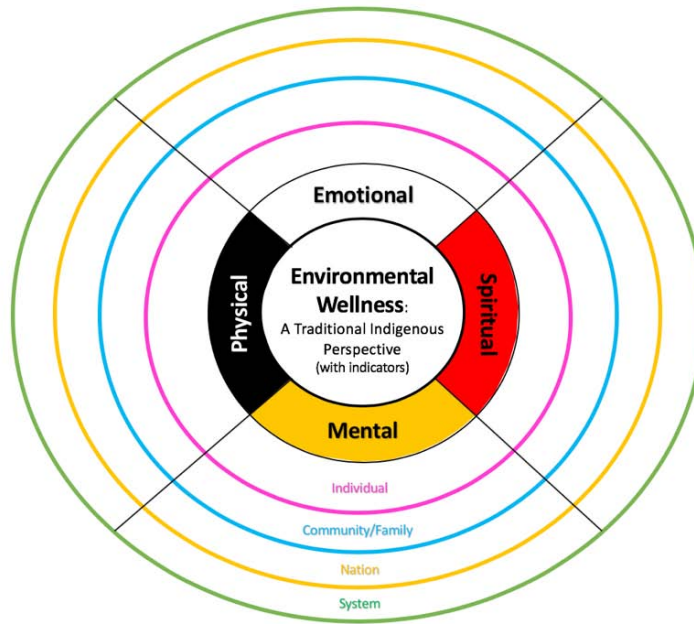Figure 13. Small-group exploration of evaluating the International Year of Indigenous Languages

Figure 14. Conceptual Model on "Environmental Wellness: A Traditional/Indigenous Perspective (with Indicators)".

The conceptual model on "Environmental Wellness: A Traditional/Indigenous Perspective (with Indicators)" is an instrument used to think through units of measurement and analysis at various nested scales (ranging from systems-level to the individual-level), across four doors/dimensions which contribute to holistic environmental wellness (emotional, spiritual, mental, and physical). The model is intended to encourage users to consider many different units of measurement and analysis relevant to Traditional/Indigenous perspectives as they think through various forms of evidence in Indigenous evaluation and sustainability efforts; which is especially the case when identifying indicators and other measures of environmental wellness for Indigenous Peoples, by Indigenous Peoples. The diagram draws from and is oriented around the Lunaape medicine wheel and CRIE model, which is the intellectual property of the Lunaape community. For more information about the Lunaape medicine wheel and CRIE model, see: https://doi.org/10.1177/1098214018790412.

Appendix VIII. Meeting Agenda

Friday, April 19
A.   Meeting Begins - Opening Remarks
B.   Group Icebreaker and Participant Introductions
C.   Review Indicator Examples (from pre-meeting responses)
D.   Morning Break
E.   Indicator Themes, Patterns, Emergent properties
F.   Lunch
G.   Reconvene and Recap
H.   Retelling Our Stories of People and Place
I.   Afternoon Break
J.   Large Group Sharing/Discussion
K.   Wrap-up Day 1 and plans for Day 2
L.   End of Day 1

Saturday, April 20
A.   Day 2 Begins
B.   Group Discussion/Brainstorm on Advancing Action
C.   Morning Break
D.   Small Group Work to Advance Action
E.   Lunch
F.   Small Group Rotations
G.   Reconvene and Recap in Full Group Setting
H.   Final Details and Next Steps
I.   End of the meeting