

CLIMATE ACTION & SUSTAINABILITY SEEMS A DISTANT DREAM IF WE STILL FACE CHALLENGES IN ACCEPTING & COLLABORATING WITH INDIGENOUS CULTURE & THEIR KNOWLEDGE SYSTEM...

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By
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ABSTRACT

The environment and climate changes interact with social and economic changes and have particularly very strong impacts on rural and indigenous communities, who depend entirely on their biophysical environment for food, access to the land, and sea, and their sense of identity. Many of the observations of indigenous forest dwellers, farmers, hunters, gatherers, and elders are consistent with those of western science, providing a strong foundation for understanding nature and mitigation of unbearable climate effects with adapting to ongoing changes at the same time as the last option. However, a commonly expressed worldview of most of the natives differs in many ways from perspectives that are now common in today's (inclined more towards chronic capitalism, uncontrolled consumption, and development to create wealth at cost of many) western science. Western science may have invented the words "nature", "biodiversity" and "sustainability", but their true initiation on these concepts is yet to be seen. Indigenous wisdom seeks to understand the natural world to adapt to it, stay connected, manage sustainably, and extend it to many generations to come. This indigenous worldview recognizes every species as integral components of the ecosystems they inhabit, connected by both biophysical and spiritual ties and motivated by respect for the natural environment and its human, non-human, and spiritual residents. This ethic of respect and reciprocity dictates a responsibility to foster the long-term well-being of all of Earth's residents. This is consistent with a paradigm of stewardship that seeks to shape trajectories of change in ways that foster ecological resilience and all species' well-being. I suggest that indigenous worldviews offer perspectives that can contribute substantially to efforts that foster every life on our planet and its sustainability with the connected energies around and in the universe as a whole.



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Indigenous peoples are custodians and protectors of some of the most biologically diverse territories in the world. They are guardians not only of forests, but also of rivers, seas, oceans, ice, peatlands, deserts, prairies, savannas, hills, and mountains. They have cultivated Indigenous knowledge systems that are nature-based, spiritualistic, interconnected, and honor the complex interdependence of all life forms which is the root of success for the sustainable management of their resources and ecosystems in which they live. Consequently, for countless generations, they have observed climatic changes for a long time and have developed effective solutions and practices for biodiversity conservation and climate change adaptation and mitigation. Throughout human history, indigenous cultures from all over the world have developed different views of nature. Many of them are rooted and hidden in traditional systems of beliefs, which indigenous people use to understand and interpret in their biophysical environment. While Indigenous peoples own, occupy, or use a quarter of the world's surface area, they safeguard 80 percent of the world's remaining biodiversity. They hold vital ancestral knowledge, expertise, & wisdom on how to mitigate, adapt, and reduce climate and disaster risks. However, there are many challenges in integrating indigenous knowledge into most of the countries' climate change actions. This includes the absence of enabling legal frameworks in the majority of countries, disintegrating indigenous knowledge (IK) systems by unfavorable legal environments and changing communities, disinterest from key decision-makers and sectors, lack of documentation of the relevant indigenous knowledge, and the lack of the necessary expertise and resources among others. Indigenous peoples even indirectly, in their promotion of biological and cultural diversity as the underpinnings of food and livelihood security as well as the quality of life. Even though Indigenous knowledge systems are considered to be essential for sustainable development and environmental management, connections between Indigenous peoples, scientists, politicians are not yet sufficiently elaborated.

"one of the most significant threats faced by indigenous peoples arises from their displacement, eviction, and separation from their lands, territories, and resources"



Indigenous people and local communities customarily manage over 50% of the global landmass, but legally own just 10%. Possibly, securing their land right is the first & important key component and could be a great initiative of the modern scientific world to integrate and increase carbon storage, reduce emissions and pollution, improve food security, diminish the likelihood of climate-related conflicts, and enhance ecosystem services and resilience. Instead, indigenous people in all regions of the world have paid and are still paying a high price for recent decades of unsustainable disconnected development. The insatiable global rush for economic growth has led to an increased demand for land and natural resources with Indigenous peoples' land being a primary target for illicit acquisitions. As a result, Indigenous communities are at risk of losing their remaining lands and territories. Whether evicted, involuntarily displaced, or forced to find their subsistence



elsewhere, these indigenous peoples become landless squatters living on the fringes of settled society in a slum disconnected from nature.

Western science may have invented the words “nature”, “biodiversity” and “sustainability”, but it certainly did not initiate the concepts. Indigenous, traditional and local communities have sustainably utilized and conserved a vast diversity of plants, animals, and ecosystems since the dawn of homo-sapiens. The notion of waste is non-existent in indigenous cultures. The various testimonies of indigenous intelligence are in fact of their constantly observing, the act of living, and surviving with nature. Furthermore, they have molded environments through their conscious and unconscious activities for millennia - to the extent that it is often impossible to separate nature from culture. Whereas, Science seeks to understand to predict nature to control it by creating technological options and acting violently on large scale, while Indigenous science seeks to understand the natural world to adapt to it, stay connected, manage sustainably, and extend it to generations to come.

...our difficulty in approaching the knowledge from indigenous cultures is already reflected in the way in which we NAME, DESCRIBE & TREAT them.

The most serious blindness - Western Science images itself to be technical, neutral, and apolitical.

Indigenous knowledge has developed a concept of the environment that emphasizes the symbiotic character of humans and nature.

Bridging Indigenous and scientific knowledge has its specific challenges to concentrate and work on. Even though Western sciences may share more common values and approaches, difficulties remain within Western interdisciplinary research itself, despite efforts to overcome barriers to communication between different knowledge systems and progress associated with these efforts. My ethnographic fieldwork experience served as a platform for discovering and reflecting on similarities, differences, and challenges of collaboration between Western or non-Indigenous and Indigenous sciences that resulted in readjusting our research methods and ethical stands. While searching for the reasons for the indigenous peoples' unwillingness to participate, several issues came to light.

- Indigenous people mistrust non-Indigenous researchers with ready hypotheses and questions to discuss, thus, collecting data to earn a degree or to accomplish a project for specific career purposes. If they consider traditional knowledge collection exclusively as a personal gain, not only this kind of approach does not contain any benefit to Indigenous communities, it also contradicts community values. Knowledge is accumulated to be transmitted not only for individuals & without sharing study results with the community, but also for community future use by future generations.

"ALL KNOWLEDGES ARE IN REALITY LOCAL"

Western Science is part of a particular cultural framework and a particular society, which is exported globally, traveling through supportive networks of experts and institutions that believe it is universal truth.

- Short-term projects are one of the further factors contributing to the distrust of researchers with Indigenous communities. Relationship-building is a long, time-consuming process. Indigenous teachers and learners often have close and long-lasting relationships through common ancestors, land, and waters. Without trust, a long-term and nurturing dialogue between a researcher and an Indigenous community, bridging Western science and indigenous knowledge is difficult to implement.
- Fear of data misinterpretation is one of the sources of distrust of researchers with Indigenous communities. Western researchers interpret traditional Indigenous knowledge from a Western perspective. Scientist shapes their research through the prism of their culture. Thus, according to the Indigenous perspective, Western science distorts traditional knowledge shared leading to data misinterpretation.

- Being an Elder is a status that an Indigenous community grants for knowledge and wisdom, they need a lifetime to acquire and to share it. In Western science, earning a degree and acquiring a higher position in the academic world presupposes a transition to a certain level of expertise. Much longer time is needed to become an Elder than to earn a degree. Thus, a researcher's goal to complete a short-term or long-term project to become an expert may be skeptically seen by knowledge-bearers of an Indigenous community.

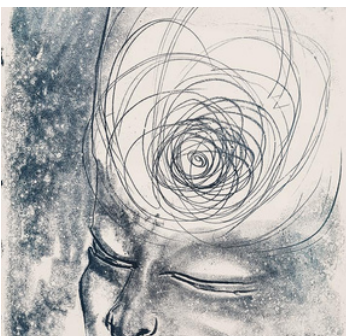
many Western companies are patenting traditional medicines without granting due recognition to the indigenous communities

Some of the strategies to address these challenges could include a focus on understanding the challenges, gaps, and opportunities in law and policy frameworks, documenting relevant IK, & partnerships with the private sector, academia, and other sectors for enhancing IK contributions to climate action, & SDGs. The experience of most indigenous people is that national forest policies and legislation have generally been designed without, or negligible, input and involvement from them. Very few countries have included considerations regarding forest-related traditional knowledge in their forest policies. For example, there are critical problems of overlap of logging concessions with traditional territories, as well as problems of illegal logging on indigenous peoples' lands. In other instances, indigenous peoples have been arrested and jailed for carrying out customary activities on lands that were declared conservation forests. Another disconcerting development is that the discussion of "natural" alliances between conservationists and indigenous people and the need to work closely also seem on the wane among the big conservationist NGOs, who appear once more to be focussing on large-scale conservation strategies in which science and economic development matter more than social and ecological realities.

- **Mobile, commensurable forms + assembled networks = knowledge of power, so science is a knowledge of power.**
- **Culture and society shape all knowledge, including science**
- **Science is blind to complexities, ways of life, and intimate knowledge.**
- **The power of science makes attempts to integrate local knowledge fail.**



Why Environmental management is completely based on science, even when it is meant to integrate local peoples and their knowledge. Everything said above about science thus applies to environmental management.



A "co-production of knowledge" transdisciplinary approach is needed that connects different systems of knowledge that are in collaboration with each other. The transdisciplinarity presupposes bringing natural, social sciences, and IK together. My social work and long observation in the remote areas in various parts of India play a key role in bridging scientific and Indigenous knowledge systems, as it seeks for methods to integrate IK systems into schools and postsecondary institutions to develop a better connection with mother earth and sustainability. Even though IK systems are considered to be essential for sustainable development and environmental management, connections between Indigenous peoples, scientists, politicians are not yet sufficiently elaborated. Effort towards an emerging approach concerned with producing and applying knowledge that is relevant for achieving human well-being while protecting the Earth's life support systems for future generations. Sustainability challenges require new forms of knowledge production and integration within and beyond academic disciplinary fields across the humanities and the biophysical, formal, social, and applied sciences, as well as other non-academic knowledge domains, such as IK and policymaking. A key aspect of this engaged knowledge field is the involvement of actors outside academia in the research process, creating a shared understanding of social-ecological systems and exploring innovative approaches for learning.

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"I have been living with the indigenous community for many years with no ever intention to develop or educate them, or to compare and comment on their way of living, instead, to recover my cultural and connected sustainable environmental roots which are lost so far in the process of getting educated in the modern education system that shifted the center of knowledge from Nature to human, collective to ego, heart to intellect, intuition to reason, experience to information, and from holistic to compartmental"

and producing knowledge that is relevant, credible, and legitimate for local communities, scientists, practitioners, and decision-makers. Studies on indigenous knowledge systems cannot ignore the role that western institutions, including markets, schools, projects, and associations might be playing in changing patterns of knowledge distribution and transmission. Considering the growing mobilization and participation of indigenous peoples in the development and conservation political arena, integrative studies will also inform and enhance cultural sharing, memory, dialogue, new technologies, and notably, the persistence of indigenous practices, communities, and identities in the face of rapid change.

If we are to go beyond the "sequestration" of indigenous knowledge by science, a connected, reflective, and interactive approach to knowledge production and application must be advanced in collaborative research projects. Participatory research emerged in the 1960s and 1970s as a critical approach in adult education in the geographic South, particularly in Africa, Asia, and Latin America, focusing on the importance of getting connected, learning, and organizing as vehicles for empowerment. It grew as a reaction to positivistic and empiricist philosophical systems, attempting to find ways of uncovering knowledge that worked.



Sustainability science is an emerging approach concerned with producing and applying knowledge that is relevant for achieving human well-being while protecting the Earth's life support systems for future generations (Kates et al. 2001). Sustainability challenges require new forms of knowledge production and integration within and beyond academic disciplinary fields across the humanities and the biophysical, formal, social, and applied sciences, as well as other non-academic knowledge domains, such as IK and policymaking (Martens 2006, Lang et al. 2012). A key aspect of this engaged knowledge field is the involvement of actors outside academia in the research process, creating a shared understanding of social-ecological systems and exploring innovative approaches for learning, and producing knowledge that is relevant, credible, and legitimate for local communities, scientists, practitioners, and decision-makers.

Understanding and supporting indigenous strategies to adapt to changing social-ecological conditions is critical to inform management and political decisions for securing the integrity of indigenous lands and the ecosystem services they provide to humanity. Studies on indigenous knowledge systems cannot ignore the role that western institutions, including markets, schools, projects, and associations might be playing in changing patterns of knowledge distribution and transmission. Considering the growing mobilization and participation of indigenous peoples in the development and conservation political arena, integrative studies will also inform and enhance cultural sharing, memory, dialogue, new technologies, and notably, the persistence of indigenous practices, communities, and identities in the face of rapid change. The Indigenous knowledge system is an integral part of sustainability and sound natural resource management; their knowledge and understanding of our world are a key part of the solutions we need to achieve a more just, equal, and sustainable future for all of humanity and species.

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REFERENCES

- https://www.wipo.int/wipo_magazine/en/2020/01/article_0007.html Climate action and sustainability: Indigenous peoples are part of the solution March 2020
- Indigenous Peoples and Climate Change: Emerging Research on Traditional Knowledge and Livelihoods https://www.ilo.org/global/topics/indigenous-tribal/publications/WCMS_686780/lang--en/index.htm
- "State of the World's Indigenous" Peoples Department of Economic and Social Affairs Division for Social Policy and Development Secretariat of the Permanent Forum on Indigenous Issues, United Nations New York, 2009
- The Indigenous World 2020, a report under The International Work Group for Indigenous Affairs (IWGIA), 2020. Edited by: Dwayne Mamo,
- TRIBAL DEVELOPMENT ADMINISTRATION: CASE STUDY OF A DISTRICT IN ORISSA AVINASH SAMAL ICSSR Doctoral Fellow Development Administration Unit. A thesis submitted to the University of Mysore for the award of the degree of DOCTOR OF PHILOSOPHY IN DEVELOPMENT STUDIES
- Challenges in Combining Indigenous and Scientific Knowledge in the Arctic by Olga Lauter École des Hautes Études en Sciences Sociales (EHESS)
- Traditional Knowledge and Wisdom: A Guide for Understanding and Shaping Alaskan Social-Ecological Change Chapter - December 2013 **Authors:** F Stuart Chapin III University of Alaska Fairbanks, Patricia Cochran, Orville H. Huntington, Corrine Noel Knapp (University of Wyoming), Todd Brinkman (University of Alaska Fairbanks) and Lily Ray ([W. L. Gore & Associates](#))
- Knowledge and Power Presented by Carol Carpenter Senior Lecturer and Associate Research Scientist, Yale School of Forestry & Environmental Studies
- Repositioning folklore and indigenous knowledge systems, Edited by Chanderbhanu Pattanayak: Centurian University press, Odisha, India
- Guimbatan, Rachel and Buguilat, Teddy Jr. 2006. "Misunderstanding the notion of conservation in the Philippine rice terraces – cultural landscapes". International Social Science Journal LVIII(58),1/187.
- Macchi, Mirjam. 2008. Indigenous and Traditional Peoples and Climate Change. Issues Paper. Gland, Switzerland: IUCN.
- Posey, Darrell A., ed. 2000. Cultural and Spiritual Values of Biodiversity. New York, N.Y.: United Nations Environment Program/London: Intermediate Technology Publications.
- <https://www.un.org/development/desa/indigenouspeoples/news/2015/11/8065/>
- <https://www.iucn.org/news/commission-environmental-economic-and-social-policy/201901/traditional-knowledge-key-achieving-africas-climate-goals>.
- Environmentalism, Human Rights and Indigenous Peoples: A Tale of Converging and Diverging Interests S. James Anaya University of Colorado Law School 2000.
- Political Economy of Tribal Development: A Case Study of Andhra Pradesh M. Gopinath Reddy K. Anil Kumar. CENTRE FOR ECONOMIC AND SOCIAL STUDIES Begumpet, Hyderabad-500016
- Territories of Life • 2021 REPORT, ICCA Consortium. 2021. Territories of Life: 2021 Report. ICCA Consortium: worldwide. Available at: report.territoriesoflife.org
- **Indigenous Knowledge, Science, and Resilience: What Have We Learned from a Decade of International Literature on "Integration"?** Erin L. Bohensky 1 and Yiheyis Maru
- Integrating local and scientific knowledge for environmental management. Author links open overlay panel Christopher M.RaymondabloanFazeycMark S.ReeddeLindsay C.StringerfGuy M.RobinsongAnna C.Evelyh
- A review of transdisciplinary research in sustainability science. Author links open overlay panel PatricBrandtaAnna Ernstb Fabienne Grallaac Christopher Luederitzc Daniel J. LangdJens Newigb Florian Reinertd David J.Absone Henrikvon Wehrden.
- Sustainability Science Harald Heinrichs (Institute of Sustainability Governance (INSUGO)Leuphana UniversityLüneburgGermany), Pim Martens (Maastricht University Maastricht The Netherlands), Gerd Michelsen (Faculty of Sustainability Leuphana University Lüneburg Germany), Arnim Wiek (school of SustainabilityArizona State UniversityTempeUSA)

