THE IGNORED INDIGENOUS GENIUS

BY HAILEY DOUGHERTY

Old customs of development, namely habits of the global north, have polluted our planet's vital land and marine resources and erased lifeforms. Climate change, the direst threat facing our world today, was brought on by industrial, agricultural, and economic modernization. In an effort to respond to these challenges, UN member states convened in Rio de Janeiro in June of 2012 to discuss the urgent need to improve human livelihoods while prioritizing environmental protection. It was at this conference, Rio+20, that the Sustainable Development Goals (SDGs) were first conceptualized, signifying an acknowledgement by world governments that we must pursue development in a different way.

The 17 SDGs, officially adopted by all UN member states in 2015, establish an ambitious blueprint for prosperity for people and the planet, a broad agenda to bring about sustainable global growth by 2030. , Why sustainable? We cannot carry on developing without the sufficient, healthy, and nutritious resources required to do so. The vast environmental degradation resulting from conventional models of development suggests that there are ecological limits to growth. Sustainable development, the strategy to cope with these ecological limitations, is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

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The 17 overarching global goals create "peer pressure" for political leaders to curb human-induced environmental destruction, but they establish no clear roadmap for the way forward. Where can we turn for exemplar *sustainable* development models? Answers conceivably lie beyond mainstream approaches. Achieving global sustainable development by 2030 calls for an immediate and focused examination of the breadth of existing knowledge on sustainable livelihoods and requires taking seriously all forms of expertise.

INDIGENOUS EXPERTISE

"Sooner or later, we will have to recognize that the Earth has rights, too, to live without pollution. What mankind must know is that human beings cannot live without Mother Earth, but the planet can live without humans."

-Evo Morales, First Indigenous President of Bolivia

A strong source of human capital has been largely overlooked in sustainable development governance. Amid rapid globalization, indigenous communities have proven their relentless ability to preserve ecological services and co-evolve with nature. Through millennia, indigenous peoples have widely maintained sustainable livelihoods, but their shared experience as victims of societal and institutional discrimination has diminished their roles in political and development discourse.

The UN system recognizes groups as indigenous peoples only if they self-identify as such. The world's indigenous communities are culturally diverse, but several traits help to spell out their likeness: historical place-based roots, connections to communities preceding colonization or pre-settler societies, distinct languages, social practices, belief systems, and a harmonized group identity. Indigenous groups have long thrived on traditional knowledge of their surroundings. They have fine-tuned livelihood strategies through trial and error over generations—an underappreciated form of science.

Among their many areas of expertise, they have accumulated best-practices for the sustainable management of natural resources. It is no surprise then that globally the highest levels of agricultural biodiversity are found in the farmed plots of indigenous populations. Agrobiodiversity is the variety and variability of plant species or genetic resources that are used for food. Humans play a central role in shaping and conserving rich biodiversity in their food systems. The central Andean countries of Peru, Bolivia, and Ecuador have one of the greatest concentrations of agrobiodiversity "hot spots" thanks to the conservation skillsets of Quechua and Aymara farmers. There, a single agricultural field can contain up to 74 different varieties of potatoes, compared to the average of 5-8 varieties that Northern American agriculture relies upon. Communities not only understand how to maintain biodiversity but how to obtain the greatest benefits from each species' unique properties. And it is the indigenous women who possess the large majority of knowledge on species diversity. Rich agrobiodiversity contributes to ecological conservation and the empowerment and autonomy of women and provides benefits to nutrition, food security, medicine, climate resiliency, and the economy—all of which are mandates of the UN 2030 Agenda.

Indigenous communities also possess insights into climate change adaptation. Unfortunately, adaptation is not a new concept for many indigenous communities who have been marginalized onto rural and remote land with poor infrastructure and productivity potential. Drought and other extreme weather events have been a recurring challenge faced by people in sub-Saharan Africa, and indigenous groups have employed a variety of strategies to cope with an unpredictable environment. For example, indigenous farmers of southern Uganda have long monitored seasonal weather patterns with high attention to detail in the weeks leading up to rains. Dissimilar to modern climatology, these farmers utilize diverse and largely qualitative environmental signs, or *obubonero*, to shape livelihood decisions. These include visible and audible observations of nearby rainstorms, bird calls, and the news of weather events disseminated by regional travelers. In recent years, they

have adapted oral knowledge sharing to radios and mobile phones, with proven adaptation benefits. Indigenous early warning systems could have compelling implications for future development projects geared towards knowledge-sharing for resiliency. Additionally, the collective memories of indigenous farmers in sub-Saharan Africa stretch back years before formal meteorological data collection, offering valuable climatic insights. For indigenous African peoples, traditional knowledge is widely considered collective and belonging to the whole community, unlike conventional economic development models that encourage the patenting and ownership of ideas. The practice of information-sharing reflects the common indigenous values of transparency and reciprocity for the benefit of all.

To realize the 2030 Agenda, widespread behavioral change will need to be instrumental. Policies and education systems must encourage greater respect and cohesion among humans and in human relationships with nature. In these efforts, indigenous ethics should be paid greater consideration. Common indigenous principles of sustainable living are (1) relationships, (2) place, and (3) kinship *(spiritual relationships)* among humans and the resources needed for survival. *Aloha aina* (to love the land) and *Malama aina* (to care for the land) are at the heart of indigenous Hawaiian virtues, which encourage commitment to respecting and protecting one's surroundings. Indigenous peoples have attempted to call attention to their profound and inherently reciprocal relationships with nature, with little recognition. It is a commonly held notion that indigenous "beliefs" are solely extrasensory superstitions devoid of veracity. But on the contrary, indigenous "beliefs" originate from tangible sequences involving sensations, emotions, and rationalizations—they are records of lived experiences, as a native Ka'u Hawaiian describes.

INDIGENOUS KNOWLEDGE SYSTEMS ARE MORE THAN CULTURAL BELIEFS, THEY ARE EXPERT HUMAN CAPITAL COLLECTIONS WITH PRACTICAL APPLICATIONS FOR SUSTAINABLE DEVELOPMENT.

Time and time again, indigenous peoples have entered the global stage only for their insights, concerns, and requests to fall on deaf ears. International governments and development actors need to restructure current conversations on traditional practices of sustainable living. Indigenous knowledge systems are more than cultural beliefs, they are expert human capital collections with practical applications for sustainable development. Appropriate institutions are needed to integrate this sophisticated and underappreciated wealth of knowledge into sustainable development governance. Considering the highly regional and localized wisdom of indigenous groups, the capacity of these communities to contribute to sustainable development governance will require a bottom-up approach in which local institutions and community organizations are empowered in higher-level dialogues.

Indigenous peoples should be given a lead voice in assessing (and implementing, when appropriate) the scalability potential of their practices, as a lack of inclusiv-

ity in development discussions would only exacerbate inequalities, contradicting SDG 10 (reducing inequalities within and among countries). Sustainable development is not a new concept to indigenous peoples, so working towards this goal on a global scale should not prompt reinventing the wheel. Incorporating the knowledge of indigenous peoples in development projects and governance will empower historically ignored sustainability experts in shaping our shared future.

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ENDNOTES

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