

TRANSFORMING PERSPECTIVES ON LIVING BEINGS – A CONVERGENCE OF KAWSAK SACHA AND CONTEMPORARY SCIENCE

This document is a joint declaration from Scientists and Original Peoples holding ancestral knowledge, that the natural world is intelligent and conscious. We declare that Nature has inherent rights to exist, to have places to thrive, and to participate in ongoing Earth processes. Our declaration reaches beyond conservation. It is a call for a transformative global shift in values and behavior concerning the natural environment. This document affirms that the inherent rights of Nature should be respected and given effect.

Statement by the Kichwa People of Sarayaku, Amazon Rainforest

Sarayaku's Living Forest (Kawsak Sacha) Proposal emerges as an alternative solution to the various environmental, social, cultural, and economic problems faced by Original Peoples of the world, humanity, and Mother Earth (Pachamama). In this sense, Kawsak Sacha proposes a transformation oriented towards a new model of society based on coexistence between living beings and living entities.

Throughout history we, the peoples of the Amazon rainforest have been and continue to be the main axes for the regulation, prevention, and maintenance of the healthcare of the Forest. We have established appropriate technologies for agriculture, hunting, fishing, gathering, medicine, art, and architecture, generating a culture and a social and spiritual life of coexistence between human beings and Mother Earth.

At present, these ancestral knowledges bind the past with the present and also allow visionary projections into the future which do not deny the conscious use of the living goods offered by the Living Forest for the creation of a model of life that is in solidarity with, and complementary and committed to, the Earth. In the current magnitude of planetary ecological crisis, it is extremely urgent to propose transformative actions of our economic and political activities, marked by respect for all the elements constitutive of the world.

This is what the Sarayaku People's declaration, entitled *Kawsak Sacha - Living Forest*, proposes. This proposal recognizes the Forest to be a conscious living being and a bearer of rights. This declaration has been presented at various important events since 2008 and must be further disseminated locally, nationally, and internationally so that it can be recognized and applied. It is in the global interest to protect forests and all sources of life to guarantee a quality of life for all and contribute positively to the climate change.

The *Kawsak Sacha* declaration is a transcendental alternative proposal which propels a transformative platform oriented in its essence to the continuity and the life of Mother Earth (Pachamama) and also therefore of human beings. This declaration is oriented towards building a life project, which we call “TIAM”, for all peoples and societies of the world.

TIAM is the positive construction of inner consciousness and thought, faced with individual or collective crisis and destruction. TIAM is a change, a profound metamorphosis, a new look and a new behavior towards a rebirth, responding to social, economic, political, and generational challenges. (Jose Gualinga).

This approach of the Kichwa People of Sarayaku, here presented, aims to achieve a legal identity for governance of territory. From that basis, it also aims to reveal to humanity an at once ancient and novel way of understanding the world, so that we can live together on the planet respecting the rights of nature, the rights of protective beings and the rights of human beings.

Statement by scientists and policy specialists working with proposals to recognise rights of wetlands, and related initiatives

We the undersigned members of the scientific and policy community hereby recognize the validity of the ancestral knowledge held by the Kichwa People of Sarayaku about the Living Forest, also known as *Kawsak Sacha*; and we express our support for this community’s assertion of their world view and its implications for environmental management. The validity of a body of knowledge can be established both by the results of its practical application in everyday life and by the evidence gathered by scientific research demonstrating the veracity of that knowledge.

We note that traditional knowledge of the Living Forest has guided the Sarayaku people to adapt and thrive, preserving their culture, cosmological view and way of life, despite the adverse external trends exhibited by a primarily consumer-oriented world. Importantly, the principles of *Kawsak Sacha* have also guided the Sarayaku people in effective action to protect and conserve the Forest, leading us to conclude that the traditional knowledge of the Living Forest has proven validity as a practical means of supporting human and ecological well-being. In comparison, the political and economic systems of the “global north”, despite decades of warnings from global scientists, have largely failed to provide adequate responses to the crises of climate change and the loss and degradation of biodiversity and ecosystems, including wetlands, forests, grasslands and oceans.

The validity of *Kawsak Sacha* is also supported by scientific thinking and by evidence gathered from the latest scientific research. Historically, scientific research often has had a “reductionist” approach. While this approach has led to numerous insights and achievements, it has also faced limitations in its capacity to understand and predict complex systems, such as the global climate system, or a wetland or a forest ecosystem, where the whole is greater than the sum of the parts.

More recently, researchers have been working to explore these complex ecological and natural systems and the interconnections that sustain them, including developing a greater understanding of the concept of dynamic equilibrium and the ability of a system to regulate itself.

Below we highlight one example of a field of scientific work that helps to support the validity and veracity of Sarayaku's ancestral knowledge about the Living Forest:

Trees are intelligent, have relationships and communicate with each other

Dr. Suzanne Simard, one of the world's leading forest ecologists, has proven that trees in a forest are connected by a root-and-fungus (mycorrhizal) network that resembles human networks, such as the network of neurons in our brains and the network of the world wide web. She and others have also discovered that chemical signals pass from tree to tree through the mycorrhizal network using the same chemicals (the amino acids glutamate and glycine) that function as human neurotransmitters. Fungal networks prune underused mycelia in a similar way to the way that brains prune underused neuronal pathways. Both fungal and neuronal networks are organized with hubs and nodes, allowing efficient communication and transmission of chemical signals.

In her book "Finding the Mother Tree"¹, published in 2021, Dr. Simard notes that older trees in forests have the most mycorrhizal connections, functioning as communication hubs for younger trees which have fewer connections. Her research has also established that older trees share nutrients and water with younger trees, which have less access to sunlight and deeper groundwater due to their shallower root systems. Interestingly, older trees send more nutrients to their own young offspring than to other young trees of different species. This shows that "Mother Trees" have a preferential relationship with their own offspring.

Dr. Simard and other forest researchers² have also shown that trees send warnings about dangers to other trees in the forest through the mycorrhizal network or by sending chemicals through the air, increasing the ability of other trees, such as young trees and newly arrived immigrant trees and including trees of other species, to survive stresses, including changes in climate and insect and herbivore attacks. Dying trees send nutrients to other surrounding trees, supporting survival of the community, much as dying humans leave resources to their heirs. Both natural ecosystems and human societies exhibit similar hallmarks of intelligence³. They rely on relationships to create resilience, and they both manifest complexity, communication, and self-organization.

¹ Simard, S. 2021. Finding the Mother Tree. Alfred A. Knopf. New York.

² Wohlleben, P. *The Hidden Life of Trees*. 2015. Greystone Books. Vancouver/Berkeley.

³ Intelligence:

"1a. the faculty of understanding: capacity to know or apprehend; 2b. ...the...ability...to use one's existing knowledge to meet new situations and solve new problems, to learn, to foresee new problems...to use..relationships, to create new relationships...ability to perceive one's environment.." – Webster's Third New International Dictionary. 1986. Merriam-Webster, Inc. Springfield, MA, USA.

Intelligent mycelial networks learn and adapt

Fungal networks facilitate long-distance communication and rapid responses via chemical transmissions, facilitating fast growth and change, and effectively functioning as fluid intelligence. These fungal networks exhibit learning behaviors in flexible, complex, adaptive network systems similar to computer networks, and produce intelligent behaviors. Electrical impulses can pass along some mycelia, and also from one part of a plant to another part. Scientists understand mycelial networks to be, "...ongoing, self-organizing happenings"⁴ with unpredictable behavior that responds to changing circumstances.

The latest scientific research has established that the natural world can be more accurately understood as operating as a whole being, a synergy of diverse connected parts. In addition to increased understanding about how animal species and communities interact with each other and with plant species, science has also recognized that plants perceive, relate, communicate and behave in different ways. They cooperate, make decisions, learn, and remember^{5,6}. In sum, scientific research leads us to conclude that the plant world, as well as the animal world, has forms of agency. These findings parallel ancestral knowledge developed over millennia by Indigenous Peoples.

Convergence of traditional and scientific knowledge, consensus on need for transformative change

If we are to stop the unravelling of the Web of Life, and avoid catastrophic climate change and biodiversity collapse, as called for by the Kichwa People of Sarayaku, and many leading global scientists, policymakers, global governance institutions, non-governmental organizations, and ordinary citizens, we must seek transformative, paradigm-shifting solutions, including recognition of the wisdom of traditional knowledge such as Kawsak Sacha, that has safeguarded the foundations of life for millennia. The principles of traditional knowledge can be integrated into dominant global legal systems through recognition of the rights of Nature, including recognition of the rights of wetlands, and the application of such rights in systems of policy-making and decision-making.

The Kichwa People of Sarayaku's Kawsak Sacha/Declaration of the Living Forest (see above) provides a powerful definition of the agenda for change that is required.

To meet the current global emergencies, global policymakers, governance institutions, and scientists are similarly calling for transformative change:

⁴ Sheldrake, M. 2020. *Entangled Life*. Random House. New York.

⁵ Gagliano, M., Vyazovskiy, V., Borbély A. et al. Learning by Association in Plants. *Sci Rep* 6, 38427. <https://doi.org/10.1038/srep38427>

⁶ Garzón, F.C. 2007. The Quest for Cognition in Plant Neurobiology. *Plant Signaling & Behavior* 2:4, 208-211

Kunming-Montreal Global Biodiversity Framework⁷

- “sets out an ambitious plan to implement broad-based action to bring about a *transformation in our societies’ relationship with biodiversity by 2030*, in line with the 2030 Agenda for Sustainable Development and its Sustainable Development Goals, and ensure that, by 2050, the shared vision of living in harmony with nature is fulfilled”.
- “aims to catalyze, enable and *galvanize urgent and transformative action*”
- “*recognizes and considers [...] diverse value systems and concepts, including, for those countries that recognize them, rights of nature and rights of Mother Earth*, as being an integral part of its successful implementation”.
- “*Implementation of the framework requires transformative, innovative and transdisciplinary education*, formal and informal, at all levels, including science-policy interface studies and lifelong learning processes, *recognizing diverse world views, values and knowledge systems of indigenous peoples and local communities*”.

IPBES-IPCC Biodiversity and Climate Change workshop report⁸

- “*Transformative change in all parts of society and our economy* is needed to stabilize our climate, stop biodiversity loss and chart a path to the sustainable future we want. This will also require us to address both crises together, in complementary ways.” - Ana Maria Hernandez Salgar, Chair of IPBES.

Scientists’ Warnings to Humanity

Scientists have been warning humanity for decades about the need for transformative change, and in 2017, following publication of the World Scientists’ Warning to Humanity: A Second Notice, formed the Alliance of World Scientists⁹ to provide a forum for sharing the warnings with the world and to develop further scientific articles addressing the global emergencies. Below are just two of the dozens of “Warnings” journal articles published by the scientific community.

- **1992 World Scientists’ Warning to Humanity¹⁰**, signed by more than 1,700 scientists:

⁷ Convention on Biological Diversity. 2022. Kunming-Montreal Global biodiversity framework <https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf> .

⁸ Pörtner, H.O., Scholes, R.J., Agard, J., Archer, E., Arneth, A., Bai, X., Barnes, D., Burrows, M., Chan, L., Cheung, W.L., Diamond, S., Donatti, C., Duarte, C., Eisenhauer, N., Foden, W., Gasalla, M. A., Handa, C., Hickler, T., Hoegh-Guldberg, O., Ichii, K., Jacob, U., Insarov, G., Kiessling, W., Leadley, P., Leemans, R., Levin, L., Lim, M., Maharaj, S., Managi, S., Marquet, P. A., McElwee, P., Midgley, G., Oberdorff, T., Obura, D., Osman, E., Pandit, R., Pascual, U., Pires, A. P. F., Popp, A., ReyesGarcía, V., Sankaran, M., Settele, J., Shin, Y. J., Sintayehu, D. W., Smith, P., Steiner, N., Strassburg, B., Sukumar, R., Trisos, C., Val, A.L., Wu, J., Aldrian, E., Parmesan, C., Pichs-Madruga, R., Roberts, D.C., Rogers, A.D., Díaz, S., Fischer, M., Hashimoto, S., Lavorel, S., Wu, N., Ngo, H.T. 2021. IPBES-IPCC co-sponsored workshop report on biodiversity and climate change; IPBES and IPCC. DOI:10.5281/zenodo.4782538

⁹ <https://www.scientistwarning.org/2017/11/05/alliance-of-world-scientists-aws/#:~:text=The%20Alliance%20of%20World%20Scientists%20%28AWS%29%20is%20an,must%20practice%20more%20environmentally%20sustainable%20alternative%20to%20business-as-usual.>

¹⁰ Union of Concerned Scientists. 1992. World Scientists’ Warning to Humanity. Cambridge, MA, USA. <https://www.ucsusa.org/sites/default/files/attach/2017/11/World%2520Scientists%2527%2520Warning%2520to%2520Humanity%25201992.pdf>.

- “Human beings and the natural world are on a collision course...**Fundamental changes are urgent** if we are to avoid the collision our present course will bring about.... **A great change in our stewardship of the earth and the life on it is required**, if vast human misery is to be avoided and our global home on this planet is not to be irretrievably mutilated”.
- **2017 World Scientists’ Warning to Humanity: A Second Notice¹¹**, signed by 15,364 scientists:
 - “To prevent widespread misery and catastrophic biodiversity loss, **humanity must practice a more environmentally sustainable alternative** to business as usual. Soon it will be too late to shift course away from our failing trajectory, and **time is running out**. We must recognize, in our day-to-day lives and in our governing institutions, that **Earth with all its life is our only home**”.

JOINT CALL TO ACTION

We, the undersigned holders of ancestral knowledge and scientists hereby note the extreme urgency of the need to effect transformative change in our relationship with the natural world. We call for immediate actions to be taken to change the current trajectory towards global climate and biodiversity collapse. The living beingness, intelligence and sentience of Nature must be recognized through cultural, legal, and governance mechanisms to ensure Nature’s rights to exist, to have a place to thrive, and to participate in ongoing Earth processes.

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¹¹ Ripple WJ, Wolf C, Newsome TM, Galetti M, Alamgir M, Crist E, Mahmoud MI, Laurance WF, and 15,364 scientist signatories from 184 countries. 2017. *Bioscience*. Vol. 67 No. 12 pp 1026 – 1028.

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