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Sustainable development: Harmony with Nature

Harmony with Nature

Note by the Secretary-General**

Summary

The General Assembly, in its resolution 70/208, decided to initiate, in 2016, a virtual dialogue on Harmony with Nature among, inter alia, experts on Earth jurisprudence worldwide, including those who had been active in the interactive dialogues of the General Assembly, to inspire citizens and societies to reconsider how they interact with the natural world in order to implement the Sustainable Development Goals in harmony with nature. The Assembly noted that some countries recognize the rights of nature in the context of the promotion of sustainable development and requested that the experts submit a summary to the Assembly at its seventy-first session and that the virtual dialogue be hosted on the Harmony with Nature website.

The experts' summary report of the first virtual dialogue of the General Assembly on Harmony with Nature among experts on Earth jurisprudence worldwide, containing their deliberations and recommendations, as well as an annex listing the names of the experts participating in the dialogue, is attached herewith.

* A/71/150.

** The views expressed in the summary report are those of the contributing experts and do not imply any expression of opinion on the part of the United Nations.

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I. Introduction

1. On 22 December 2015, the General Assembly adopted resolution 70/208, its seventh resolution on "Harmony with Nature", in which it requested the Secretary-General to initiate, in 2016, a virtual dialogue on Harmony with Nature among, inter alia, experts on Earth jurisprudence worldwide, including those who have been active in the interactive dialogues of the General Assembly, in order to inspire citizens and societies to reconsider how they interact with the natural world in order to implement the Sustainable Development Goals in harmony with nature, noting that some countries recognize the rights of nature in the context of the promotion of sustainable development, and requested that the experts submit a summary to the General Assembly at its seventy-first session and that the virtual dialogue be hosted on the website on Harmony with Nature.

2. A first step in recognizing the rights of nature took place in June 2012 at the United Nations Conference on Sustainable Development, held in Rio de Janeiro, Brazil, where Heads of State and Government adopted the outcome document, entitled "The future we want", recognizing that the Earth and its ecosystems are our home and that some countries recognize the rights of nature in the context of the promotion of sustainable development. They also agreed that, in order to achieve a just balance among the needs of present and future generations, it is necessary to promote harmony with nature.[1]

3. Subsequently, in its resolution 70/1, adopted on 25 September 2015, the General Assembly adopted the post-2015 development agenda, the 2030 Agenda for Sustainable Development, which contains 17 Sustainable Development Goals, including Goal 12, target 12.8, which seeks to "ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature". In the context of the 2030 Agenda, the 2016 virtual interactive dialogue advances the implementation of target 12.8 by providing information and recommendations from experts in Earth-centred governance, also known as Earth jurisprudence.

4. The first virtual dialogue on Harmony with Nature was initiated on 22 April 2016, in commemoration of International Mother Earth Day, and concluded on 22 June 2016. The dialogue built upon the conclusions of the five interactive dialogues on Harmony with Nature held from 2010 to 2015.

5. The experts on Earth jurisprudence who participated in five interactive dialogues on Harmony with Nature, held from 2011 to 2015, and those joining for the first time recognized the intrinsic value of nature and the need to shift our perceptions, attitudes and behaviours from anthropocentric or human-centred, to non-anthropocentric or Earth-centred. Their work both theorizes and advances strategies grounded in restoring an Earth-centred worldview.

6. In the Earth-centred worldview, the planet is not considered to be an inanimate object to be exploited, but as our common home, alive and subject to a plethora of dangers to its health: this process requires a serious reconsideration of our interaction with nature as well as support for Earth jurisprudence in laws, ethics, institutions, policies, and practices, including a fundamental respect and reverence for the Earth and its natural cycles.

[1] Resolution 66/288, para. 39.

7. The focus of the virtual dialogue therefore was on how to reshape human governance systems to operate from an Earth-centred rather than human-centred perspective, so that we may all be guided to live as responsible members of the Earth community.

8. Over 120 international experts from different continents, totalling 33 nationalities, joined the virtual dialogue (see annex). The experts addressed Earth jurisprudence from the following eight disciplines, all of which have been addressed in the six previous reports of the Secretary-General on Harmony with Nature:[2] Earth-centred law; ecological economics; education; holistic science; the humanities; philosophy and ethics; the arts, media, design and architecture; and theology and spirituality.

9. A number of experts who participated in past dialogues acted as facilitators, interacting online, across continents, with experts in the different disciplines. On the basis of written submissions and online interactions, the facilitators prepared summaries of the above-mentioned disciplines, which constitute the basis of the present report.

10. The following questions were the same for all disciplines:

(a) What would the practice of the selected discipline look like from an Earth jurisprudence perspective? How is that different from how the selected discipline is generally practiced now? And, what are the benefits of practicing the selected discipline from an Earth jurisprudence perspective?

(b) What promising approaches do you recommend for achieving implementation of an Earth-centred worldview for the discipline selected?

(c) What key problems or obstacles do you see as impeding the implementation of an Earth-centred worldview in the discipline selected?

(d) What are the top recommendations for priority, near-term action to move your selected discipline toward an Earth jurisprudence approach? What are the specific, longer-term priorities for action?

11. Given the overwhelming interest and wide participation of experts in Earth jurisprudence in the first virtual dialogue, and the extensive information provided in their written submissions, it is strongly recommended that the summary report be read in conjunction with inputs of the individual experts, all of which are available at the Harmony with Nature website (www.harmonywithnatureun.org/wordpress/2016-dialogue/).

II. Earth jurisprudence: a holistic system of governance

12. Experts from around the world working in the natural and social sciences and members of the Harmony with Nature Knowledge Network participating in the virtual dialogue recognize the need for a holistic worldview rooted in respect for Nature[3] and the interdependence of humankind and the Earth. They believe that humanity, which is inextricably part of the community of life on Earth, cannot continue to override the laws that maintain the homeostatic balances of the Earth system.

[2] A/65/314, A/66/302, A/67/317, A/68/325, A/69/322 and A/70/268.

[3] Henceforth in the report, the word Nature is capitalized in the experts' summary in recognition of Nature's inherent rights in an Earth-centred worldview.

13. They stress that economic growth for some has been achieved at the expense of the natural world, as well as of many human populations. Paired with unsustainable consumption and production patterns, the current economic system has relentlessly altered the dynamics and functioning of the entire Earth system to a degree never before seen in human history.

14. At the core of the current anthropocentric worldview, the Earth is viewed as a source of raw materials to be commercialized, exploited, modified, altered and privatized. This has significantly affected the health of the Earth, our life-giving source, and, by default, the well-being of humankind. Rising rates of poverty, famine and inequality reflect complex social realities that are intricately interwoven into the present ecological crisis, which, in itself, reflects a poverty of spirit.

15. In order to forge a balanced and healthy relationship between human activity and the Earth, there is an urgent need for society to replace the current anthropocentric worldview with a holistic system of governance, in which humanity plays a different role in how it perceives and interacts with the natural world. In this new role, humanity would accept the reality that its well-being is derived from the well-being of the Earth and that living in harmony with nature is a necessary means to sustaining human well-being and human rights.

A. Philosophical and ethical principles of Earth jurisprudence

16. Experts in philosophy and ethics emphasize the need for a new paradigm that allows humanity to repair its current destructive relationship with the Earth.

17. Earth jurisprudence recognizes the Earth as the source of natural laws that govern life. It provides a cohesive framework that underpins many disciplines, weaving them together to create a more effective, holistic governance approach, reflecting the integrated nature of the world in which we live. Worldwide, indigenous peoples' philosophies, spiritualities and traditional forms of knowledge express the understanding that human governance systems must be derived from the laws of the Earth and be in compliance with them.

18. Earth jurisprudence is interdisciplinary, identifying basic values that should govern economics, the physical sciences, laws and, ultimately, the contours of a holistic orientation in all disciplines. By expanding philosophical inquiry into Earth jurisprudence we can develop responsible environmental ethics and deepen our understanding of how being in harmony with Nature brings true meaningfulness and fulfilment to our lives.

19. Earth jurisprudence implies wholeness, and a complex and deeply interdependent life-support network that rejects the logic that gives priority to the "part" as distinct from the whole, whether it is the individual versus the community or the State versus the world. An Earth-centred model can be imagined as a culture of partnership wherein the central values are equity, cooperation, dialogue, inclusion, comprehension, agreement, respect and co-inspiration, illustrating how Earth jurisprudence can reshape prevailing models.

20. The philosophy of Earth jurisprudence can be formulated under four main principles: subjectivity: the Universe is a holism, with values and rights; community: everything is related and coexists with everything else; lawfulness and order: there are organizing patterns in the Universe and in the Earth community that we can detect and understand; and wildness: the order and lawfulness in the Universe remains dynamic, mysterious and unpredictable.

21. Earth jurisprudence is in line with traditional indigenous conceptions of the world and shares features of many of the world's spiritual traditions, which interact with the Earth on the premise that humans are intimately and inextricably entwined with Nature. For indigenous peoples, philosophical and ethical concepts include plants, animals, water and air as beings with their own conscious experiences and agency. They believe that Nature should be recognized as having agency its own source of power, energy and identity.

B. Governance from an Earth jurisprudence approach

22. The main goal of Earth jurisprudence is to reconnect our thoughts and practices with Nature's processes, including reliance on a bottom-up approach to decision-making that is value-driven in ways that question prevailing ideologies associated with neoliberal globalization and new surges of nationalism. Earth jurisprudence is an approach that underscores the urgency of reconstructing civilization on ecological principles of sustainability and collaborative relationships with the natural world.

23. Incorporating the indigenous approach, including its concepts of Earth jurisprudence, into mainstream philosophy and ethics removes the artificial difference between humans and Nature, creating a world in which children are raised to believe that to love Nature is to love one's self, in which all people are compelled to consider the consequences of this entwined reality in their economic and political interactions.

24. Another means for helping to bridge the gap between humankind and Nature would be the fostering of ecocentric democracy in political decision-making at all levels. Ecocentric democracy can be defined as follows: "Groups and communities using decision-making systems that respect the principles of human democracy while explicitly extending valuation to include the intrinsic value of non-human Nature, with the ultimate goal of evaluating human wants equally to those of other species and living systems that make up the Ecosphere".[4]

25. Experts who addressed Earth jurisprudence from a theology and spirituality perspective called for a rethinking of the role of doctrines containing the notion of "dominion" and "stewardship" (over creation), and called for an alternative understanding of our role that places humans as "earthlings" in the Earth community. Increasingly, the call for spiritual and ethical insight is being taken up by many contemporary voices.

26. The experts highlighted that a newly found spiritual interaction with Nature is not just a means of "correcting" our relationship with the Earth, but also a way to enhance spirituality, and that to reach our full human potential we need this core connection.

27. In June 2015, this view was echoed in the encyclical letter of Pope Francis, "*Laudato Si*" ("Praise Be to You"), the first message in Vatican history to specifically address humanity's relationship with the environment. It also addresses many of the challenges highlighted by the experts who have participated, over the years, in the interactive dialogues of the General Assembly on Harmony with Nature, including: (a) the intrinsic value of Nature; (b) respect for the laws of

[4] http://www.harmonywithnatureun.org/wordpress/wp-content/uploads/Papers/Ecodemocracy.pdf.

Nature; (c) consumption and anthropocentrism; and (d) the role of indigenous peoples and cultures in our contemporary world. Specific references to those issues can be found throughout *Laudato Si*.

28. The major challenge of contemporary philosophy, ethics, theology and spirituality is to fashion an Earth-centred jurisprudence that can reshape the dominant model, advancing a collaborative relationship between human activity and its natural surroundings. To move in this direction is to move beyond the Anthropocene epoch,[5] leaving behind the logic of profitability as the raison d'être for economic activity.

29. Broad-scale adoption of an Earth-centred worldview, the only way in which the impending species extinction crisis can be averted, advances the concept of humankind and of our activities as integrated with all life on the planet. Earth jurisprudence offers a new path towards a worldview ensuring that we live in harmony with Nature.

III. Challenges and opportunities for applying Earth jurisprudence

30. In light of the unprecedented ecological challenges impacting every aspect of our existence, Earth jurisprudence requires an understanding of humanity's integral role within Earth's interdependent natural systems, including a shift in law, policy and economics. Its applicability has also had a positive effect on the way other disciplines are currently researched and studied.

31. In addition to the law and economics discipline, experts addressed the applicability of Earth jurisprudence in education; holistic science; the humanities; the arts, media, design and architecture; and philosophy and ethics.

32. In all of the above-mentioned disciplines, the prevailing anthropocentric paradigm has been highlighted as the obstacle to a holistic system of governance, although, gradually, Earth jurisprudence principles are being incorporated in a number of them. Earth jurisprudence is the thread that increasingly binds the disciplines together, mutually reinforcing them.

33. The subsections below provide a quick overview of some of the challenges and the applicability of Earth jurisprudence in the different disciplines.

A. Earth-centred Law

34. Earth-centred law and policy was represented by the largest group of experts, who considered how Earth jurisprudence may be implemented "to inspire citizens and societies to reconsider how they interact with the natural world in order to implement the Sustainable Development Goals in harmony with nature".[6]

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[5] This term is widely used to denote the present epoch, in which many geologically significant conditions and processes are being profoundly altered by human activity.

[6] In a number of cases, language enclosed in quotation marks is drawn from the submissions of different experts, but, in the interest of space, there is no specific attribution; individual inputs are available online at the Harmony with Nature website (www.harmonywithnatureun.org/wordpress/2016-dialogue/).

35. Experts from around the world made recommendations for Earth-centred law and policy to ensure a flourishing Earth, expanding on the current Sustainable Development Goal strategies. Earth-centred law looks beyond the Goals in order to achieve them, including those Goals not specifically tied to the environment.

36. The first step is to include the rights of Nature in our governance systems, not by advancing its interests within the capital system as resources to be exploited, but by recognizing the fundamental legal rights of ecosystems and species to exist, thrive and regenerate. Nature is regarded as the source of basic "Earth rights" and these rights cannot be validly circumscribed or abrogated by human jurisprudence. These rights are not in opposition to human rights: as part of Nature, our rights are derived from those same rights. The human right to life is meaningless if the ecosystems that sustain us do not have the legal right to exist.

37. The rights of each sentient being are limited by the rights of all other beings to the extent necessary for the maintenance of the integrity, balance and health of larger ecological communities. Legal systems must impose obligations on human beings to respect the roles and the rights of non-human members of the Earth community. For example, a legal system based on Earth jurisprudence would have courts or tribunals to arbitrate conflicts between humans, and between humans and other beings, on the basis of which particular outcome would best maintain the integrity, balance and health of the Earth community.

38. In 1972, Christopher D. Stone published a book entitled *Should Trees Have Standing? Toward Legal Rights for Natural Objects*, in which he pointed to the widening of society's "circle of concern" that had led to the recognition of the legal rights of women, children, native Americans and African Americans. Stone argued that increasing public concern for the protection of Nature should lead to the recognition of the rights of Nature, which would enable the initiation of legal suits on behalf of trees and other "natural objects", including damages to be recovered and applied for their benefit.

39. Subsequently, the American Earth scholar and cosmologist Thomas Berry argued that we need a jurisprudence that would provide for the legal rights of geological and biological as well as human components of the Earth community, and that a legal system set up exclusively for humans was not realistic. Berry also emphasized that the habitat of all species should be given legal status as sacred and inviolable.

40. In a 2002 article entitled "Nature's Rights", Chilean lawyer Godofredo Stutzin noted that the development of law had reached a crucial moment, and that the idea and the ideal of justice had to acquire a new universality comprising the entire biosphere, adding not only new objects, but also new subjects to the legal establishment. Stutzin argued that recognizing the rights of Nature would constitute an act of justice by which the law, advancing in its process of development, would confirm the distinctive values inherent in the natural world, leaving behind the indefensible anthropocentric vision of Earth according to which the planet and all that exists upon it are but the environment of humankind, with no value other than their usefulness to the human species.

41. Currently, under most national laws, all non-human entities are considered as property. While it is not necessary to end the idea of property, the notion that a deed to property conveys with it the right to destroy an ecosystem needs to be changed.

Decision-making should be based on a hierarchy of needs defined by the integrity of ecosystems and their ability to thrive. Policies based on this idea would require changes in how we regulate the use of natural resources, and how decisions are made.

42. This is distinct from current environmental laws, which are ineffective based on the conceptual underpinning: such laws, including an endangered species listing system that cannot keep pace with current extinction rates; after-the-fact litigation that relies on proving individual loss with no obligation to restore ecosystems as systems; and an inability to bring cases on behalf of the injured environment (as opposed to on behalf of humans beings alone). These laws work by breaking ecosystems into separate parts, which is inconsistent with the fact that they are entwined and interdependent.

43. What is being regulated at present is how much destruction can occur. By contrast, an Earth jurisprudence model asks: "What would a healthy system look like?". In asking this question, we must recognize indigenous traditional ecological knowledge. Despite a lack of reliable global data on the extent of the Earth's surface under ownership, management and use by indigenous peoples and local communities, some researchers estimate that indigenous and forest peoples hold legal entitlement to about one-eighth of the world's forests, and protect about 80 per cent of its biodiversity. They hold traditional knowledge built on centuries of living in harmony with the ecosystems they are a part of and have always protected, and they are experts that need to be regarded as leaders in how to care for a local ecosystem.

44. For example, New Zealand is currently making strides in enacting Earth-centred law and policy after recognizing the spiritual and holistic "personhood" of the Whanganui River and Te Urewera (which now have no "owners") as part of the State's ongoing settlement process with the Maori peoples. The Maori people consider that the river and forest are their ancestors, and that they have the responsibility and the privilege to care for them as family members.[7]

45. Inclusion and recognition of the rights of Nature in international, regional, local and national law is vital, including in municipal ordinances (for example in the United States of America),[8] constitutions (for example in Ecuador) and national laws (for example in the Plurinational State of Bolivia), including the civil society call for the international adoption of a universal declaration of the rights of Mother Earth. In this regard, it should be noted that Ecuador amended its constitution in 2008 to recognize the rights of Nature in light of the perceived need to better protect Nature, or *Pachamama*, a term that embodies not only the physical aspects of the natural world but also its spiritual aspects, which require deeper respect than they have been given in law.

46. Article 71 of the constitution of Ecuador states that Nature, or *Pachamama*, where life is reproduced and exists, has the right to exist, persist, maintain itself and regenerate its own vital cycles, structure, functions and its evolutionary processes, and that any person, people, community or nationality may demand the observance of the rights of the natural environment before public bodies. Article 72 of the constitution

[7] For more detailed information on the different ways that New Zealand has recognized Maori cosmology in law, see Catherine J. Iorns Magallanes, "Maori Cultural Rights in Aotearoa New Zealand: Protecting the Cosmology that Protects the Environment" *Widener Law Review*, vol. 21, No. 2 (http://ssrn.com/abstract=2677396).

[8] See, "Ordinance of the City Council of the City of Santa Monica Establishing Sustainability Rights" (9 April 2013), Santa Monica Municipal Code.

addresses restitution, stating that nature has the right to be completely restored. The Government of Ecuador has taken a number of judicial and administrative actions to implement the constitutional provisions relating to the rights of Nature.[9]

47. In another example, parallel to the structure of the Universal Declaration of Human Rights,[10] the "Universal Declaration of Rights of Mother Earth", adopted at the World People's Conference on Climate Change and the Rights of Mother Earth, held in 2011, recognizes, in its article 1 (4), the "inherent rights of Mother Earth" to the natural world's "life, liberty and security of person".[11] These include the rights of the Earth and of all beings to "life and to exist", to "integral health" and to "identity and integrity".[12] The Declaration added that those rights, like human rights, "arise from the same source as existence".[13]

48. A further international example arises from the International Union for the Conservation of Nature (IUCN), a non-governmental organization with thousands of expert partners offering scientific, legal and other expertise which holds official observer and consultative status at the United Nations. At its quadrennial meeting in 2012, IUCN adopted a resolution recommending that it incorporate consideration of the "Rights of Nature" at "all levels and in all areas of intervention", create a "strategy for dissemination, communication and advocacy concerning the Rights of Nature" and begin the development of and promote a "Universal Declaration of the Rights of Nature" as a "first step towards reconciliation between human beings and the Earth as the basis of our lives, as well as the foundations of a new civilizing pact".[14] More recently, the IUCN World Commission on Environmental Law proposed formal adoption of a draft World Declaration on the Environmental Rule of Law, which provides that "All life has the inherent right to exist".[15]

49. Court systems also need to evolve. At a minimum, we must establish special tribunals to defend the rights of Nature from an Earth-centred perspective in local, national, regional and international justice systems. This will necessitate the education of judges and public prosecutors, and a change in the legal system to reflect a new, Earth-centred practice, including by strengthening case law and the setting of new precedents. Recent research shows that judicial momentum happens most effectively "below the radar", through the advancement of local cases rather than through highly politicized ones.

50. With respect to the courts, the establishment of the International Rights of Nature Tribunal by the signature of a "people's convention", held in Paris in December 2015 on the margins of the talks on climate change, is particularly significant. The Tribunal illustrates how experts from different disciplines could apply the Universal Declaration of the Rights of Mother Earth and international

[9] Craig M. Kauffman and Pamela L. Martin, "Testing Ecuador's Rights of Nature: Why Some Lawsuits Succeed and Others Fail", paper presented at the annual convention of the International Studies Association (Atlanta, Georgia, 18 March 2016).

[10] Resolution 217 A (III).

[11] See resolution 217 III (1948), article 3.

[12] https://pwccc.wordpress.com/programa/.

[13] IUCN and World Commission on Environmental Law, World Environmental Law Congress, Rio de Janeiro, Brazil, April 2016.

[14] See World Conservation Congress "Incorporation of the Rights of Nature as the organizational focal point in IUCN's decision-making" (IUCN, WCC-2012-Res-100, September 2012).

[15] IUCN and the World Commission on Environmental Law, World Environmental Law Congress (Rio de Janeiro, Brazil, April 2016).

human rights law in specific circumstances. It has generated and will generate judgments for the development of a body of Earth jurisprudence in practice and map out a way forward (see http://therightsofnature.org/rights-of-nature-tribunal).

51. While the recognition of the rights of Nature in law is necessary it is not sufficient. The power and claimed "rights" of corporate actors to influence legislation must shift dramatically in the face of a new Earth jurisprudence. Special attention needs to be paid to ensure that the "rights" of corporations are either eliminated or placed under the prioritized rights of the natural world to exist, thrive and evolve. This is particularly necessary in order to achieve the Sustainable Development Goals, as most are impacted negatively by the rapidly expanding assertion of corporate rights and the associated accumulation of wealth and political power in the hands of a few, at the expense of the many.

52. Recognizing the existence of the rights of Nature prioritizes the dignity of the human being and the dignity of the Earth over corporate personhood.

B. Ecological economics[16]

53. The major problem observed today is the view of Nature and the planet Earth as a "resource" to be used by the market economy. Attention to concerns about Nature and Earth-centred law is often viewed as creating barriers for economic growth. However, blind adherence to economic growth as a measure of well-being has resulted in increasing harm to the planet and to all of us.

54. The rational imperative of *homo economicus* towards profit maximization, market control, consumption and accumulation of material goods gives rise to a myopic goal of short-term gain for the few. This results in priority expenditures on war and armaments, and support for dysfunctional financial institutions and conspicuous consumption instead of the provision of education, health, sanitation, drinking water and social services for the poor. The prevailing belief that economics is value-free and economic problems are systemic and can be cured by Government action only adds to the lack of will to make meaningful changes for the betterment of all people and the Earth.

55. The challenge is to develop a deeper and more profound understanding of what it means for human beings to be an integral part of the natural world, and to put this understanding at the heart of economic theory and practice.

56. The imperative based on individualism, materialism and freedom from values produces tendencies and systems that are entrenched in modern economic practice, including an almost universal acceptance of private ownership of land and the environment, including patenting of nature and natural systems, without obligation to any wider Earth community, including humankind. There is an almost universal failure to equate the concept of land ownership with ownership of Nature or to identify the real beneficiaries of private ownership, let alone the moral implications of private ownership of Nature.

57. Economics should properly be considered as a holistic science in search of laws governing the relations between people, the planet, the cosmos, human society and the Earth community.

[16] See A/68/325.

58. Recent efforts to use the existing neoliberal economic system to "correct" the ills generated by unlimited economic and population growth will fail because they do not recognize humans as part of Nature. But we must be aware that not all alternatives to the current dominant paradigm are true allies. The "Green economy" is a dramatic example of this, in its focus on commodifying nature to "save" it. Anthropocentric and technocratic paradigms also ignore the fact that growth in the "free" market system, combined with greed to accumulate instead of circulating wealth, leads to monopoly and the extinction of true democracy.

59. For example, the "polluter pays principle" runs against the tenets of Earth jurisprudence as its focus is about how much to pay in exchange for damaging the environment, rather than about restoring the integrity and the health of Mother Earth. In this regard, money alone will never suffice. We must consider prohibition or the swift phasing-out of environmentally destructive practices like fossil fuel use. Other suggestions include a legal requirement for companies to demonstrate that they benefit the environment and an overhaul of the tax system to reward good environmental practices and penalize poor ones.

60. Our economic system must consider the "wellness" of the Earth, independent of how that wellness contributes to the immediate welfare of humankind. An Earth jurisprudence perspective recognizes the health or "wellness" and interconnectedness of the Earth and its ecosystems as normative values that will give rise to moral human standards by which economic practices and solutions will be guided. As such, Earth jurisprudence does not offer an alternative economic approach, it is more ambitious.

61. Experts commented that it is simply and profoundly wrong to continue to teach economics as if the economy is not connected to Earth's life support systems; finance as if it is simply lubricant for exchange; and law as if humans are the rightful owners of Earth and all its life.

62. Experts further considered a complete revision of our monetary and financial systems. Money is currently created as interest-bearing debt that obeys the laws of exponential growth. Most money is loaned for the purchase of existing assets, which drives up prices in a positive feedback loop, enriching owners but creating no new wealth. Price bubbles inevitably burst, leading to massive defaults on debt and economic crises with terrible impacts on the poor.

63. Furthermore, there should be a legally enforceable duty of care for the Earth applicable to all parties claiming exclusive possession of any piece of land, including the environment and the ecosystems it encompasses, based on the principle that it should be left in as good or better condition than that in which it was found.

64. Experts also suggested the establishment of an international institute of economists founded on an "Economists oath" similar to the Hippocratic oath, obliging them to act and advise at all times in the best interests of the Earth community, regardless of who is paying them or for what purpose.

C. Education

65. Experts stated that education needs to move away from "the use of money as a measuring stick", and as well as from reliance on economic "development" as a policy criterion. The requisite ecocentric philosophy aligns with the deep

sustainability of co-evolving environments, where, biodiversity and “Earth justice” take priority over competitiveness and individual profit. In order to move towards a “regenerative economy” and “permaculture ethics”, education will also need to transcend separate disciplines.

66. To better understand the intricately connected web of life and to ensure respect and acknowledgement that human beings are one part of the Gaia Earth system requires education, and advocacy. Extensive education and training should be integrated into basic school and higher educational systems in order to facilitate a deep experiential connection with Nature from childhood.

67. Education and training must foster our appreciation of other species as living beings with an important role to play in a radically interconnected web of life and teach that our lives are interdependent with theirs. We need an openness and humility to learn from cultures that still have a deep connection with nature and to implement knowledge from ancient wisdom around the world that fosters more heart-based approaches to life.

68. Learning “needs to happen through life”, and to involve both collaborative projects and frequent experiences out of doors. This reflects the views of several influential environmental thinkers, including Jack Mezirow (the founder of the concept of “transformative learning”), Thomas Berry and Rachel Carson, all of whom explored the concept of “ecopedagogy”.

69. Experts strongly advocated interdisciplinary education and education in the field. In addition to the experiential and developmental philosophy of John Dewey and of the Waldorf and Steiner curricula that underlie many current initiatives, a number of current and highly promising approaches were mentioned, many of which include a spiritual emphasis that complements a current and narrowly economic definition of personal and social well-being.

70. In Benin, for example, the non-governmental organization Groupe de Recherche et d’Action pour le Bien-Etre au Benin (GRABE-Benin) was established as a learning centre for ecologically sustainable agriculture, along with numerous “Nature and culture clubs” and intergenerational learning centres for youth and elders. In Sweden, there is a governmentally sponsored “Action Plan for Learning and Education for Sustainability”, whose goal is “transformative change” aimed at achieving the 17 Sustainable Development Goals. Both Sweden’s “Nature schools” and the approach of the Plurinational State of Bolivia to outdoor learning and agriculture under “Buen Vivir” both aim to complement traditional disciplines with an emphasis on wholeness, connection and balance.

71. School gardens can be especially valuable in exposing students to models of “small-scale food production”. Experts expressed their appreciation for the Transition Movement (http://www.transitionus.org/about-us) and for Joanna Macy’s initiative “Work that Reconnects”.

72. Other exciting approaches include those adopted by the Regional Schools and College Permaculture Programme (ReSCOPE) in Africa, the Permatil initiative in Timor-Leste, the “Children in Permaculture” project in Europe, the Outdoor Classroom Project, the Camphill Movement for “curative education” and the Ruskin Mill Biodynamic Agriculture Training Programme in England, which works curatively with the manual arts.

73. From primary schools to Universities, there should be a general debate on Earth-centred law and jurisprudence [17] through the realization of dialogues at Universities, public hearings for the civil society and authorities and speeches aimed at children in public and private schools. It is crucial to empower all those working in academia and in civil society, and children in particular, with Earth jurisprudence principles so that they may act as agents for change.

D. Holistic science[18]

74. Experts agreed that the sciences remain dominated by reductionist methodologies — and a narrow disciplinary focus. In part this is because of their success in advancing technological innovations that society finds useful. Nonetheless, elements of more holistic approaches are rapidly advancing in the scientific community, including the now established field of study known as Earth system science.

75. The modern origins of Earth system science can be traced back to the seminal work of James Hutton and his treatise on a "Theory of the Earth", published in 1788, and Vladimir Ivanovich Verdansky's publication *The Biosphere*, published in 1924. An integrated systems perspective on Earth in toto was further advanced by Donella Meadows and colleagues in their 1972 publication, *The Limits to Growth*, and, in the same year, in James Lovelock's Gaia theory, outlining that the Earth functions like a self-regulating organism. Holistic science would continue in this tradition and would similarly encompass the interactions between the major subsystems (e.g. biosphere, geosphere, hydrosphere and atmosphere), the Earth's energy balance and biogeochemical cycles.

76. In addition to recognizing multiple connections and feedbacks between components and subsystems as in Earth system science, holistic science demands that every problem be given a top-down worldview context, recognizing the Earth as a complex system of connections, flows and processes that are in continual "conversation", with feedbacks at and between all scales of organization.

77. Holistic science would be adept at drawing upon knowledge from the humanities, including philosophy, focusing on relationships between subjects rather than studying isolated objectives devoid of meaning. Holistic science would also engage with the traditional ecological knowledge of indigenous peoples. Holistic science would address the numerous ways in which humans interact with the multiple social and ecological environments they inhabit and shape, including the connection between indigenous peoples and the preservation of biodiversity, acknowledging both that humans are part of the system being investigated and that other species are not objects, but living entities that deserve our moral consideration.

78. Useful analogies can be drawn between health sciences and holistic science. In the same way that health science has an explicit, normatively framed mission (to promote the health and well-being of people and populations), holistic science would have a normative mission to promote the health and well-being of the Earth

[17] For example, the study of Earth law at Vermont Law School and of Earth jurisprudence at Barry University School of Law.

[18] See A/69/322.

community. This would require the study of humans living together in peaceful coexistence with all of the Earth's residents.

79. Holistic science should articulate a mission that is idealistic, problem-oriented and Earth-centred, and scientists with a specialization in work across disciplinary boundaries should be valued. The benefits of a mission-oriented holistic science would be enormous, including the generation of knowledge and approaches that would enable the transition of human societies away from the current damaging relationship between humankind and the Earth to a restoration of balance and enhanced interdependence.

80. An example of the way that Earth system science is evolving into a more holistic, mission-oriented science is illustrated by the "Future Earth" research initiative, which aims at developing the knowledge base for effectively responding to the risks and opportunities of global environmental change and supporting transformation towards global sustainability in the coming decades, including the implementation of the Sustainable Development Goals. While this trend and such initiatives are welcomed, further advances are needed if holistic science consistent with and supportive of Earth jurisprudence is to be realized.

81. One of the contributions of holistic science could be to craft a new scientific narrative that helps engage people and communities with what it means to be human, where we have come from and where we might be going. Earth-centred holistic science can help develop a universal understanding, integrating the natural sciences, social sciences and the humanities while maintaining awareness of transdisciplinary methodologies linking the laws of thermodynamics, human intuition and ethical values. At the same time, Earth-centred holistic science would focus on solving real problems for which reductionist solutions are ineffective.

82. Current approaches to the Anthropocene epoch that focus on human impacts on the Earth's biogeochemistry need to be expanded. Concepts such as the Symbiocene,[19] an era when human action, culture and enterprise would nurture the mutual interdependence of the greater community and promote the health of all ecosystems, are more promising and solution-oriented.

83. Another concept that can help "join up the dots" is biophilia — our innate drive to connect with Nature. Methods grounded in the idea of biophilia, such as the connectedness to nature-scale and rewilding, support the movement toward holistic science.

84. Of particular promise are scientific efforts that combine traditional ecological knowledge of indigenous peoples (long-established models of holistic science) with traditional science in order to cogenerate knowledge. The very roots of holistic science can be traced back to ancient history and traditional wisdom.

85. Finally, the experts considered that we need to support holistic science that helps us define, measure and track our progress toward "healthy" ecosystems, ecosystem integrity and planetary sustainability. While these goals are articulated in international and national laws and declarations, including in the Sustainable Development Goals, the science underlying them focuses primarily on whether the systems are not completely degraded rather than actually flourishing, and generally

[19] http://www.harmonywithnatureun.org/wordpress/wp-content/uploads/DialogueInputs/GlennAlbrecht.H.Science.pdf.

address only discrete elements of those systems (including water quality, topsoil levels and particular species counts), rather than the systems themselves. Holistic science that examines whether systems are thriving is essential to the successful implementation of Earth-centred governance.

E. The humanities

86. Experts in the humanities expressed concern that modern civilization is driven by industrial growth, which expands economies and technology but does not guarantee the preservation of biodiversity and healthy ecosystems but rather leads to their destruction.

87. As highlighted in other disciplines, the main obstacles in the humanities for the implementation of an Earth-centred worldview is the "development ideology", "the dominant academic ideology aligned with capitalist forces and the capitalist paradigm". This economic paradigm is in conflict with alternative knowledge and with traditional and indigenous cultures.

88. Participants in the virtual dialogue considered that the social sciences are currently divided into two main groups: the dominant, liberal and neoliberal paradigm, and the emancipatory paradigm that recognizes the inherent moral worth and rights of the Earth, as expressed in the Andean concept of Mother Earth, *Pachamama*. In addition, "the practice of humanities in a non-human-centred perspective would require a revolution in human thought, as the Copernican revolution did, owing, for the most part, to the prevailing assumption that human consciousness is the superior consciousness in Nature".

89. In the humanities there is usually an implication of essential distinction and dualism as inherent analytical notions accompanying anthropocentric capitalism, the source of myriad ecological crises.

90. The application of Earth jurisprudence in the humanities would therefore mean the adoption of a human project "as one particular instance of a universal project that embraced all living creatures and the whole of Nature". This approach would advance an interconnection and an interdependence between all traditional academic disciplines since Earth jurisprudence can broadly be described as a practical philosophy based on the understanding that Nature is a "communion of subjects" rather than a "collection of objects". In addition, "its practice should imply other symbolic forms, not only written words, but other ways to interact with Nature".

91. Four practical approaches should be considered: (a) supporting communication on Earth jurisprudence in the humanities through the media and other modes of communication; (b) promoting activities such as retreats in nature; (c) encouraging forums where academics and activists are not separated; and (d) the development of an Earth-centred vocabulary that better reflects our interconnections with Nature.

92. A more interdisciplinary and intercultural paradigm should come from those who are excluded from the capitalist system in order to bring about a "planetary emancipation". In this regard, there are concrete examples of coalitions between civil society and lawyers working to bring about an understanding of Earth jurisprudence.

93. One promising approach is that followed by the African Biodiversity Network, which supports traditional knowledge and seed revival as well as the efforts of indigenous communities in “progressively reviving the meanings and symbolism of totems, names of rivers, seeds, seasons, etc.”.

94. A shift of academic studies of the humanities is needed. For example, some experts suggested that philosophy and epistemology should focus more on imagination and intuitive knowledge. Literature should be more inspired by ecopsychology and history, including the concept of the evolution of consciousness of all species. Experts also noted that the works of authors such as Thomas Berry and Albert Einstein, as well as of Tony Cunningham, a well-known South African ethnobotanist, should be studied more intensively.

F. Philosophy and ethics

95. The experts in the field of philosophy and ethics concurred that Western civilization has an anthropocentric philosophical tradition based on a moral hierarchy and/or moral dualism between beings, a doctrine that holds up the human “rational” mind as the foundation of values and rights and that justifies and defends human supremacy. This binary or dualistic concept has governed the relationship between man and Nature and has rarely sought to merge the words “Earth” and “jurisprudence”.

96. In our competitive culture, we are guided by the “ethics of convenience” and a “cultural philosophy that condones domination”, exhorting the values of competition, authority, power and, ultimately, war. Herein the needs of Nature are subordinated to private property rights and economic considerations so long as there are no legal or ethical constraints limiting those rights. The exploitation of natural resources is free from constraining ideas of interconnectedness with Nature.

97. The prevalence of such values has led, as a consequence, to the ravaging of the Earth. This prevailing anthropocentric “tunnel vision” of society — shared by popular public opinion and the scientific establishment, and even forming part of philosophical discussions — is the hardest obstacle to overcome. It is driven by at least three factors: (a) the restricted focus of educational systems; (b) government practices, at least in many of the more powerful countries; and (c) unrestricted advertising for non-essential goods, and materialism in general.

98. To promote an Earth-centred worldview, political leaders and people around the world have to think of strategies for promoting this position in their societies. People must question the current worldview, including the principles and mechanisms underlying anthropocentrism and its key elements. Along with this critical inquiry, people must actively imagine an alternative Earth-centred worldview, with its own principles, mechanisms, elements and methods. Critical thinking, methodological self-reflection and imagination must be brought together to inform a kind of philosophy that would effectively promote a revision of the current worldview.

G. The arts, media, design and architecture

99. Among the experts in the disciplines of the arts, media, design and architecture, there was a prevailing concern that the media, large design houses and other institutional elements have a virtual monopoly on output, which they maintain in order to popularize their own political bias — invariably one informed and driven by the dominant anthropocentric mindset. This relationship is fundamental in these disciplines as they constitute the primary means of asserting, reinforcing and mainstreaming this particular worldview.

100. In a number of instances the concept of sustainability has been misappropriated to support consumerism and anthropocentrism, for example by posing the question "how can we sustain our level of consumption?" rather than "how can we sustain the entire biosphere?". Sustainable design and architecture should challenge prevailing models rather than being used as a means of justifying or altering them in a token fashion.

101. At present, professional practices are not only anthropocentric, they are also North and Eurocentric, urban centric, white, male and heteronormative, and this concentration of accreditation, prestige and power is self-fulfilling: paradigms that might institute collaborative, Earth-centred design and media are denigrated and excluded. The cult of the individual is a key component of this worldview, and it has had a devastating effect in the world of the arts, media, design and architecture where the work of humankind is always considered to be superior to the work of nature, and the work of the individual is glorified, thus amplifying tendencies towards solipsism[20] and hedonism over communal or global well-being.

102. Experts asserted that these disciplines must move towards a collaborative paradigm rooted in and driven by collective practice, a model that is more reflective of the common good and imagination than isolated "genius". Furthermore, indigenous-led projects across all the disciplines would allow often deeply Earth-centric societies to set an example for the rest of humankind and also encourage a culture and practice of community-led arts, media, design and architecture.

103. It is vital that we re-establish connection with nature. Rather than focusing solely on human dramas and themes, projects should explore and celebrate the natural world and our role as part of it. While such a transition may be easier in the arts and architecture, which are rooted in celebration and ritual, change is also needed in the field of media and design, which are vital expressions of human culture and meaning.

104. As a part of the political-economic system, these disciplines have maintained aesthetic and commercial considerations as measure of success, but there will have to be a change. "Edu-tainment" must replace the current fare presented as entertainment in mass communication, and artists and producers must be aware of the needs of the community and the planet.

105. Experts advanced the inclusivity of an Earth-centred approach to these disciplines. While traditional media will continue to play a role, technological advancement can also be harnessed for social and planetary good: computer games, television, radio and the Internet (including social media and online news) often

[20] The view or theory that the self is all that can be known to exist.

have the ability not only to be collaborative, but also to be profoundly global, drawing humanity together and making us aware, as a species, of our role on the planet.

106. We can draw humanity closer to Nature through the use of the media on local as well as global levels. Examples of such practices are included the United Nations Educational, Scientific and Cultural Organization (UNESCO) Biosphere Soundscapes project, which explores the creative possibility of acoustic ecology, and exemplified in the work of Tim Collins and Reiko Goto, environmental artists whose "primary focus is on natural public places and the everyday experience of the environmental commons".

IV. Conclusion

107. We, experts on Earth jurisprudence and members of the Harmony with Nature Knowledge Network, take this opportunity to express our appreciation to the General Assembly for entrusting us, through the adoption of its resolution 70/208, to address Earth jurisprudence and to present a summary report to the Assembly.

108. The high-level of participation in this first virtual dialogue, which included over 120 experts from all continents, allowed us to interact and share, both in written form and orally, the most up-to-date information on Earth jurisprudence being gradually applied worldwide in the different disciplines.

109. In light of the volume of information contained on the website, the present summary report provides an overview on Earth jurisprudence. All written submissions of the experts are available as supplementary information at the Harmony with Nature website (www.harmonywithnatureun.org/wordpress/2016-dialogue/).

110. Given the fundamental interconnections between humanity and Nature, the urgent need to inspire citizens and societies to reconsider how they interact with the natural world and the importance of the implementation of the 2030 Agenda over the next 14 years, it is our view that Earth jurisprudence principles should be included and applied in the implementation of all 17 Sustainable Development Goals.

V. Recommendations

111. The experts of the Harmony with Nature Knowledge Network, composed of practitioners, thinkers and academicians who have participated in past interactive dialogues of the General Assembly and in this first virtual dialogue on Harmony with Nature addressing Earth jurisprudence, are committed to sharing their knowledge and expertise with all parties interested in advancing an Earth-centred worldview, reflecting the principles and values of Harmony with Nature and employing current scientific information.

112. The following recommendations are addressed to Member States, United Nations programmes, the specialized agencies and international and non-governmental organizations, including educational institutions, which, through the Harmony with Nature initiative, share a belief that the world community has an opportunity to

highlight the urgent need for coordinated action in the face of the widespread threats to the health of our natural world.

113. The experts of the Harmony with Nature Knowledge Network strongly encourage and recommend that all parties take action in the following areas, as appropriate to their expertise and authority:

A. Earth-centred law

- Convene the experts of the Harmony with Nature Knowledge Network to recommend metrics by which progress towards the top-level Sustainable Development Goals could be measured from an Earth-centred perspective. This process would be similar to the request for broader measures of progress outlined in paragraph 38 of "The future we want" (resolution 66/288).[21]
- Train and support lawyers to work for the rights of Nature.
- Collect regularly and broadly publicize living examples around the world of successful implementation of Nature's rights in law.
- Develop a new, integrated legal perspective and policy framework around rights of Nature and tie it to other struggles for justice, including describing how the recognition of Nature's rights (and rejection of governance systems that harm those rights) positively impacts the struggle, inter alia, for racial justice, climate justice and environmental justice, as well as to rectify growing wealth inequality.
- Adopt a United Nations resolution endorsing the importance of exploring the potential of Earth jurisprudence as a framework for developing international, national and local governance systems that will enable human communities to live in Harmony with Nature, and encouraging public and private sector institutions to make resources available for this purpose.
- Establish a fund under the auspices of the United Nations for ongoing research into the practical application of Earth jurisprudence to achieve the Sustainable Development Goals.
- Involve indigenous peoples' organizations (including the United Nations Permanent Forum on Indigenous Issues) in all United Nations initiatives concerning Earth jurisprudence to benefit from their deep understanding of how to exercise our responsibility towards ecological communities.
- Provide support for implementation of the IUCN resolution (WCC-2012-Res-100, September 2012) calling for the incorporation of the rights of Nature concepts into law and science.
- Give special emphasis and protection for sacred natural sites, including bans on extractive activities at such sites.

[21] "We recognize the need for broader measures of progress to complement gross domestic product in order to better inform policy decisions, and in this regard request the United Nations Statistical Commission, in consultation with relevant United Nations system entities and other organizations to launch a programme of work in this area, building on existing initiatives".

- Support entities working to pass and implement local laws recognizing the rights of Nature.
- Work to develop standards for implementation of the rights of Nature for all countries, for example, on the definition of the "health" of an ecosystem or species.
- Define life cycles, the structure of ecosystems and evolutionary processes.
- Develop regulations for the protection and restoration of Nature before, during and after environmental conflicts.
- Involve participants in the United Nations interactive dialogues on Harmony with Nature in the drawing up of annual action plans.
- Develop future interactive dialogues on Harmony with Nature to include the use of different languages (e.g. Spanish, Portuguese and Kichwa).
- Promote, conduct and disseminate studies and research in order to compare the similarities and differences between the Earth-centred worldview of the West and the East.
- Review the concept of customary law and the principles of analogy beyond Western culture (e.g. *Pachamama*). Ancient customary law can be a source for Earth-centred law.
- Promote the establishment of "Rights of Nature" tribunals around the world to adjudicate cases of violations of the rights of Nature in order to demonstrate how Earth jurisprudence can be applied effectively to address the key challenges of the twenty-first century, including climate change. These could be modelled on the tribunals held by members of the Global Alliance for the Rights of Nature, including the drafting and dissemination of the judgements of the tribunals and efforts to ensure implementation of recommendations.

B. Ecological economics

- Promote education and training at all levels in Earth-centred thought and understanding.
- Move ecology, critical thinking and connection with Nature to the centre of the teaching of economics, including a holistic view of what it is to be human and part of Nature.
- Recognize and teach economics as a normative subject, with implications for individual morals or ethics based on a long-term view of the welfare of Nature and of succeeding generations.
- Understand and value the connection between the spiritual and material aspects of human existence and integrate them to value the well-being of people and the planet equally, above material gain.
- Establish enforcement procedures and institutions for recognizing rights of Nature and the human duty of care for Nature, including a "Declaration of the Rights of Nature"; the establishment of an international environmental tribunal; and criminal sanctions for crimes against Nature, particularly directed at corporations and those who control them.

- Study and teach the implications of private ownership of land and Nature for all members of the Earth community. Establish an internationally recognized system of land registration, use it to enforce fundamental duties for all people who have exclusive use of the natural environment and collect publicly created rental value for public use, with particular emphasis on the protection of Nature and its rights.
- Stop the privatization of Nature by establishing an international system of patents and copyrights based on common asset trusts.
- Create new economic measures to include the well-being of Nature, including human beings, in measuring economic progress and success.
- Direct research to produce technologies that improve the lives of those who are economically disadvantaged while promoting a mutually enhancing relationship between people and Nature.
- Develop monetary and fiscal systems that treat both money or credit creation and access to Nature through exclusive ownership as a global commons to be utilized for the good of the whole Earth community.

C. Education

- Develop guidelines on education, to be determined by a permanent international body or forum mandated to guide members of the academic community and of civil society, and children in particular, towards greater awareness of the serious ongoing ecological crisis, of the fact that efforts made so far have not been able to revert it and that, therefore, Earth-centred law and Earth jurisprudence are important tools for change. This international body would also inspire a change in the institutions of the Member States.
- Promote initiatives, programmes and policies to transform education and to nurture a sense of affiliation with the larger community of life.
- Promote and support civil society training in the philosophy and practice of Earth jurisprudence, including ecoliteracy.
- Promote educational and cultural reform to overcome the growing threat of "Nature deficit disorder" by fostering connections between schools and Nature-based agriculture wilderness exploration, including indigenous peoples' worldviews.
- Urge individuals to be conscious of their responsibility and accountability to Nature.

D. Holistic science

- UNESCO to organize, in collaboration with the International Council for Science, an international symposium on the topic "Towards holistic science: — barriers and opportunities" in order to initiate a dialogue between the humanities and the sciences focused on holistic science. This symposium could draw on efforts under the "Future Earth" initiative to advance a more integrated approach to Earth system studies inclusive of the human dimension.

- The science, technology and innovation capacity-building mechanism envisioned for the least developed countries under Goal 17, target 8, of the 2030 Agenda should include holistic, Earth-centred science options and knowledge to provide for a genuine opportunity to achieve a sustainable future.
- Establishment of a worldwide database of initiatives to share promising methods and applications of holistic science.
- Holistic science measures should be part of a new measurement of progress as called for in Goal 17, target 9, of the 2030 Agenda.
- Promising models of Earth jurisprudence and the application of holistic science that are already established should be documented and evaluated, lessons learned shared and, where appropriate, replicated. This task could be coordinated between the United Nations Harmony with Nature framework. UNESCO and IUCN may also have an interest in being involved in this project.

E. Humanities

- Support the revival of indigenous knowledge and learning from their cultures, practices and governance systems.
- Recognize traditional cultures as relevant examples for healing the Earth and sustaining human livelihoods.
- Transform the academic disciplines to become Earth-centred.
- Increase the number of lessons about relationships between all aspects of life (holistic thinking).
- Support increased cultural production on a cooperative basis.
- Create alternative centres of learning psychology.
- Promote the training of Earth jurisprudence facilitators (using models provided by the Gaia Foundation “training for transformation” initiative and the growing African Earth jurisprudence network).
- Establish regional conferences and dialogues on Earth jurisprudence practices and strategies.
- Create opportunities to discuss Earth rights.

F. Philosophy and ethics

- Introduce the concept of Nature into mainstream environmental politics.
- Integrate the voices of indigenous ethicists and philosophers into mainstream environmental decision-making.
- Rethink the meaning of the terms “sustainability”, “development”, and “economic and social progress” so that necessary changes may be made in consumption and production patterns in congruence with the varying carrying capacities of Nature in diverse regions and localities.

- Integrate Earth jurisprudence into political/philosophical dialogues on how to recognize and rethink democracy, acknowledging that human rights depend on Nature's rights.
- Promote the studies of the philosophy and Earth ethics as essential core curriculum requirements for all fields of education, including law, the natural and social sciences and the arts.
- Promote the widening of humankind's understanding of its place in the Universe through openness to the philosophical enlightenment that inspires ecological models of behaviour and relevant public policies.
- Preservation of all remaining wildlands in which ecological and evolutionary processes are still unfolding without human disturbance as reference sites to underpin and inspire the ecological vision.

G. Theology and spirituality

- Create, foster and further interreligious dialogue, both as part of this paradigm change and in general (with the Southern African Faith Communities' Environment Institute serving as a good example). The dialogue should include the participation of world religious leaders, encouraging them to provide firm leadership and to focus on guiding their adherents and congregations towards greater love and respect for creation.
- Create awareness-raising material on the Harmony with Nature paradigm accessible for religious leaders, their congregations and wide sections of society.
- Create spaces and programmes for people to encounter spirituality in Nature.
- Support rights of Nature legislation, especially ensuring that it retains a deep and/or spiritual level and is not just another way of paying lip service to the concept of living in harmony with Nature.
- Promote academic transformation, conferences and learning spaces on non-anthropocentric theology.
- Theological education for all religions should involve debate on the subject of harmony with Nature, as well as material supportive of this paradigm, including practical ways of living that reflect this understanding.

H. The arts, media, design and architecture

- Encourage the media to promote wider understanding about, and communicate the importance of, Earth jurisprudence.
- Implement public policies to decentralize education of architecture and planning professionals beyond the cities, incorporating local customs.
- Include Earth jurisprudence approaches in undergraduate, postgraduate, research and scholarship programmes in the arts, media, design and architecture.

- Create a coalition and a strategy to build a support network of practitioners in the field.
- Provide funding for practitioners of Earth jurisprudence approaches and their projects.
- Create indigenous and other project case studies along with knowledge-sharing and dialogue.
- Promote an Earth-centred approach to design and construction projects, including wider use of renewable energy within projects, a focus on water use and the reduction of greenhouse gas consuming or greenhouse gas emitting materials.
- Apply the principles of the Earth Charter.
- Encourage education, local to each country, promoting Nature.
- Create a linguistics council to develop an Earth-centred vocabulary to replace the utilitarian vocabulary in use.
- Harness a framework of designers, producers, broadcasters and media network professionals to promote understanding about, and communicate the importance of, Earth jurisprudence.
- Fund research and publishing of Earth jurisprudence approaches, including projects led by indigenous communities.
- Educate policymakers and practitioners on an ongoing basis in this field.
- Create public information access systems.
- Help build new media and communications models as alternatives to the large multinational media monopolies.

Annex

Experts of the Knowledge Network on Harmony with Nature participating in the first virtual dialogue of the General Assembly on Harmony with Nature among experts on Earth jurisprudence worldwide

The following 127 experts took part in the first virtual dialogue on Harmony with Nature among experts on Earth jurisprudence worldwide and submitted papers under the following eight disciplines.[a] Those experts who also acted as facilitators are identified by footnotes.

Earth-centred law

Abate, Randall

Bagni, Silvia

Ballantyne-Brodie, Laura[b]

Berros, Maria Valeria

Biggs, Shannon[c]

Borras, Susana

Boyle, Simon

Cabanes, Valerie

Carducci, Michelle

Choi, Eunsoon

Cullinan, Cormac[d]

Damtie, Mellese

De Carvalho Dantas, Fernando

De Oliveira Moraes, Germana

Deen, Traci

Dene, Frederik David

Derani, Christiane

Greene, Natalia[e]

Hosken, Liz

Hasson, Vanessa

Islas, Jorge

[a] http://www.harmonywithnatureun.org/knowledgenetwork/dialogue-inputs/.
[b] Facilitator, Asia, Australia and Oceania.
[c] Facilitator, North America.
[d] Facilitator, Africa.
[e] Facilitator, South America.

Ito, Mumta[f]

Kauffmann, Craig

Kok, Marjolein

Kim, Young Joon

Maloney, Michelle

Martinez, Esperanza

Mead, Lisa

Mitambo, Simon

Montini, Massimiliano

Negrini, Maria Carolina

Park, Taehyun

Pelizzon, Alessandro

Perez Villaroel, Joffre

Ragettli, Doris

Robertson, Colin

Ruz Buenfil, Alberto

Sayeg, Ricardo

Scarlin, Roger

Sheehan, Linda[g]

Shiva, Vandana

Sifkovik Vrbica, Senka

Tabios, Anna Leah

Wilton, Fiona

Yilma, Mersha

Ecological economics

Arruda, Marcos

Brown, Peter G.[h]

Diarra, Adama

Farley, Joshua

Felber, Christian

Girardi, Gherardo

[f] Facilitator, Europe.
[g] Global facilitator, Earth-centred Law.
[h] Facilitator.

Larrea, Carlos

Makewell, Raymond

Mandhyan, Kishore

Mason, Ian[h]

Mofid, Kamran

Stryker, Josiah Dirck

Szeghi, Steve

Willmann de Donlea, Eva

Education

Appolinaire, Ousso Lio

Egli, Thomas

Elder, John[h]

Geiger, Lincoln

Goldring, Andy

Hogber, Niklas

Theil, Pella

Holistic science

Albrecht, Glenn

Bekoff, Marc

Brindis, Claudia

Canney, Susan

Costa, Paola

Elbers, Joerg

Gingerich, Owen

Gomez, Mariana

Gundidza, Method

Lawrence, Mark

Mackey, Brendan[h]

Mayer, Stephan

McKibben, Jeanne W.

Mcdaid, Liziwe

Rosales, Jon[h]

Schmidt, Jeremy

Shingu, Hideo

Tivell, Anders

Viveros, Felipe

Yelemty, Fassil

The Humanities

Berry, Sheila

Cashford, Jules

Lambert, Joseph[h]

Malomalo, Bas'Ilele

Tabaro, Dennis

Philosophy/ethics

Baudot, Barbara[h]

Bell, Mike

Courtney, Charles

Crawhall, Nigel

Damery, Patricia

Dommen, Edward

Falk, Richard

Flipo, Fabrice

Gray, Joe

Guerra, Willis

Hallgren, Henrik

Mathews, Freya

McMillan, T.S.

Mendonça, Pedro

Smith, Oliver

Waters, Rachel

The arts, media, design and architecture

Bazbaz, Salomon

Biemann, Ursula

Bish, Joseph

Campero, Chloe

Cano, Gabriela

Feiter, Louisa

Lopez, Erika

Mertinez, Jean Paul[h]

Moassab, Andreia

Moore, Erin

Nelson, Ilka

Ribeiro dos Santos, Tatiane

Theology/spirituality

Dahl, Arthur Lyon

Davies, Geoff

Goyns, Glynis

Hosken, Liz[h]

Mogano, Lydia

Putz, Oliver

Raiser, Konrad

Sacta Campos, Veronica