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Harmony with Nature

Report of the Secretary-General

Summary

The present report is submitted pursuant to General Assembly resolution 69/224, in which the Assembly requested the President of the Assembly to convene, at its sixty-ninth session, an inclusive and interactive dialogue on Harmony with Nature to commemorate International Mother Earth Day, in April 2015, and the requested Secretary-General to submit a report to it on the implementation of the resolution at its seventieth session. The report of the Secretary-General focuses on the relationship between humanity and nature, and provides an exploration of ways to achieve the sustainable development goals, including addressing climate change in the post-2015 development agenda through Harmony with Nature, as was reflected in the interactive dialogue in April 2015.

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I. Introduction

1. The General Assembly, in its resolution 69/224, entitled “Harmony with Nature”, requested the President of the Assembly to convene, at its sixty-ninth session, an interactive dialogue on the subject, to be held at the plenary meetings to be convened during the commemoration of International Mother Earth Day on 27 April 2015,[1] with the participation of Member States, United Nations organizations, independent experts and other stakeholders, and to submit to the Assembly, at its seventieth session, a report on the implementation of that resolution, to be included also as an input for the discussion of the post-2015 development agenda.

2. Recent General Assembly resolutions on Harmony with Nature have recognized the importance of giving due consideration to the issue in the formulation of the post-2015 development agenda. The fifth interactive dialogue provided another opportunity for all relevant stakeholders to reflect on the relationship between humanity and nature, and to explore ways to achieve the forthcoming sustainable development goals, including addressing climate change, in the post-2015 development agenda through harmony with nature.

3. The outline of the present report reflects the main issues that were discussed in the fifth interactive dialogue and presents what both the speakers and the latest literature say about those issues.

4. The fifth interactive dialogue discussed: (a) the Harmony with Nature paradigm, examining how it could contribute towards the achievement of the forthcoming sustainable development goals; and (b) anthropocentric thinking, which centres exclusively on people, even though there has been a realization that people need to live in a healthy environment and that unsustainable patterns of consumption and production could lead to, among other outcomes, ecosystem deterioration, soil erosion, desertification, climate change, loss of biodiversity and ocean acidification. The cogeneration of knowledge, including indigenous, investigative, political, empirical, emotional and spiritual knowledge, is therefore important for understanding the relationship of humankind with nature. Many speakers at the dialogue stressed the need for a holistic approach to the economic, social and environmental dimensions of sustainable development to live healthy and productive lives and preserve the environment. Accordingly, the importance of ensuring successful outcomes of the interlinked processes of the third International Conference on Financing for Development, held in Addis Ababa in July 2015, and the twenty-first Conference of the Parties to the United Nations Framework Convention on Climate Change, to be held in Paris in November and December 2015, has been underlined.

5. The introduction to the report of the Open Working Group of the General Assembly on Sustainable Development Goals states that, “in order to achieve a just balance among the economic, social and environmental needs of present and future generations, it is necessary to promote harmony with nature” (see A/68/970 and Corr. 1, para. 9). Proposed target 12.8 also states that, by 2030, the goal is to “ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature”. The aim is to

[1] The official date of International Mother Earth Day is 22 April.

deepen the understanding of harmonious and balanced relationships between human activity and sustainable lifestyles that are linked to sustainable consumption and production. Raising awareness of sustainable development, which includes recognition of the intrinsic link between human beings and nature in order to foster a mutually beneficial relationship, is essential for achieving a transformative post-2015 development agenda that will preserve the Earth for present and future generations.

6. Traditional ecological knowledge, upon which many ancient civilizations, indigenous peoples and cultures draw, can deepen that understanding. The present report provides an outline of key aspects of what constitutes traditional knowledge. This insight should serve as an impetus for the international community to give serious consideration to the subject of harmony with nature.

II. Modern science and traditional ecological knowledge

7. Since the rapid industrialization of the 1950s, scientists have issued warnings about the rapid increase in greenhouse gas concentrations, deforestation and species extinction. Furthermore, scientists have also been monitoring what is termed the "sixth extinction", the result of from how human beings have altered life on the planet. The sixth extinction has been predicted to be as devastating as the asteroid impact that wiped out the dinosaurs some 66 million years ago.[2]

8. At the fifth interactive dialogue, Professor Mark Lawrence, Scientific Director at the Institute for Advanced Sustainability Studies in Potsdam, Germany, and panellist at both the second and fifth interactive dialogues on Harmony with Nature, stressed the need to give the post-2015 development agenda a solid scientific and spiritual foundation.

9. Professor Lawrence also stated that science might provide the answer to questions of which factors are controlling the year-to-year variability in temperature. On the other hand, science alone could not provide an answer to the challenges of people persist in doing things that are detrimental to their health, and perhaps to others around them, even when they are fully aware of this and have good alternatives available.

10. Another panellist, Robin Kimmerer, Distinguished Teaching Professor at the College of Environmental Science and Forestry, State University College of New York, stressed that science was a powerful tool and should play a role in decision-making, although it was not the only tool. Ms. Kimmerer said that one of the traits of modern science was that it strove to be purely objective and strictly material in its explanations, and thus the influence of social values were intentionally excluded. However, many of our present sustainability issues were at the intersection of nature and culture, in human values, and thus value-free science could not be the only approach upon which to rely.

11. Developing effective solutions to such challenges in a post-2015 development world will require carefully bringing together the various forms of knowledge available.

[2] Elizabeth Kolbert, *The Sixth Extinction: An Unnatural History* (Picador, 2015).

12. Transdisciplinary research seeks to bring these forms of knowledge together. It does not replace basic science; rather, it adds to it, with science playing a key role in cogenerating knowledge together with all relevant stakeholders in such work.

13. Cogeneration of knowledge, in particular by including indigenous knowledge, is important. Many research centres and universities are beginning to explore this form of transdisciplinary knowledge generation, among them the Institute for Advanced Sustainability Studies.

14. Science guided by indigenous environmental philosophy can prove valuable. Traditional ecological knowledge represents experience acquired over thousands of years of direct human contact, observation and interaction with the environment.

15. It is important to note that traditional knowledge is more comprehensive than traditional science, given that science is but a part of non-indigenous knowledge.[3] The key characteristics of traditional knowledge are that it is: based on lived knowledge, practice, teachings and experiences passed from generation to generation; knowledge of the dynamics of the ecosystem (snow, ice, weather, water and land) and the relationship between them; holistic and cannot be separated from the people who hold it; the basis of customary laws; and dynamic, cumulative and stable. Traditional knowledge also sets out rules governing the use of the land.[4]

16. Traditional knowledge incorporates knowledge of ecosystem relationships and the environment and promotes ecosystem relations, human-animal interactions and even social relationships, since the latter continue to be established and reaffirmed through hunting and other activities. Traditional knowledge works with non-traditional knowledge to form a rich and distinctive understanding of life and the world.

17. The global scientific community acknowledged and endorsed the relevance of indigenous knowledge at the World Conference on Science, held in Budapest in 1999, recommending that traditional knowledge be integrated, in particular, into the field of environment and development, given that the important role that traditional knowledge has played in the development of modern science has been clearly demonstrated by science historians.

18. Furthermore, the development of Western science has drawn heavily on traditional knowledge, and Western scientists relied upon indigenous descriptions of plant ecology and their systems of classification.[5]

19. In the mid-twentieth century, ethnoscience rooted in the pioneering work of Harold Conklin appeared as a new approach to traditional knowledge. Since then, there have been several examples of close cooperation between science and traditional knowledge.

20. One example is the use of traditional knowledge for sustainable development. Scientists with the Consultative Group on International Agricultural Research began

[3] Alan R. Emery and Associates, “Guidelines for environmental assessments with indigenous people”, March 1997 (available from http://www.kivu.com/prototype-guidelines-1997).

[4] See “What is traditional knowledge?” (available from http://www.nativescience.org/html/traditional_ knowledge.html).

[5] Roy Ellen and Holly Harris, “Introduction”, in Roy Ellen, Peter Parkes and Alan Bicker (eds.), *Indigenous Environmental Knowledge and its Transformations: Critical Anthropological Perspectives* (Overseas Publishers Association, 2000).

to implement participatory technology development using traditional practices and the indigenous knowledge of local populations as a starting point.

21. Traditional knowledge also provides empirical insight into crop domestication, breeding and management, as well as principles and practices of swidden agriculture, agroecology, agroforestry, crop rotation, pest and soil management and other agricultural activities.[6]

22. Despite their differences, traditional knowledge and Western science share some similarities. For example, they are both the result of the intellectual process of creating order out of what is perceived as disorder. However, traditional knowledge is mainly qualitative, holistic and based on diachronic data and the empirical accumulation of facts by trial and error as opposed to experimentation and the systematic accumulation of facts.

23. Traditional knowledge works with nature and its laws and cycles in a reciprocal relationship. Traditional governance systems are derived from traditional knowledge, accumulated over generations of living with, learning from and adapting to nature. Evidence of this lies in the fact that indigenous and traditional cultures around the world have developed a diversity of highly adapted traditions on the basis of the particular ecosystems in which they have successfully sustained themselves and their environments for millennia.

24. The difference between what we conceive of as science and traditional knowledge is that traditional knowledge is holistic and that it focuses on the interrelationship between different aspects of the environment and the climate. It relies on the way that knowledge is structured in terms of networks, and, for example, how different species are interlinked by observing them within their natural context. Science, on the other hand, relies on the analysis of the environment in separate scientific disciplines, using classifications and data collection.

25. If scientists are able to cooperate with local knowledge holders, this might enhance the development of research practices. An example of such cooperation, in Bangladesh, showed how the inclusion of indigenous and scientific knowledge in mapping the terrain improved flood plain management.[7]

26. Both traditional knowledge and Western science have been used in the search for better and more effective systems of risk reduction in both mountain and coastal ecosystems, as well as in water and housing management. Cooperation between the two is demonstrated in a number of examples. In Sri Lanka, traditional water management systems used to cope with drought risk reduction have proved effective and been complemented by food storage and crop protection strategies. In Japan, traditional knowledge is used for the prevention of floods.

27. Roy Ellen, Emeritus Professor of Anthropology and Ecology at the University of Kent, wrote that [t]here are many ways of securing knowledge of the material world. Thus, making a differentiation between science and traditional knowledge is just a way of categorizing two activities that are essentially looking at the same

[6] Roland Bunch, *Two Ears of Corn: A Guide to People-centered Agricultural Improvement* (Oklahoma, World Neighbors, 1982) (available from http://marriottschool.net/emp/WPW_bak/Two_Ears_of_Corn_lg.pdf).

[7] See Paul Sillitoe, “Interdisciplinary experiences: working with indigenous knowledge in development”, *Interdisciplinary Science Reviews*, vol. 29, No. 1 (March 2004).

subject (the Earth) from the same perspective (the human one) and using the same tools (experience). They access the "real world to various degrees of imperfection and subjectiveness."[8]

28. Bernard Patten, Regents Professor Emeritus at the University of Georgia underlines that descriptive science, which relies on classifications and categorizations of the environment, may have been a good way to identify problems, but not for solving them. To address those problems, a more multidimensional approach is needed.

29. For example, the indigenous Dene population that inhabits the Mackenzie Basin in Canada, which has extensive knowledge of the local climate, met with a group of scientists from the Global Energy and Water Cycle Experiment to exchange information. Neither party to the discussions perceived scientific and traditional knowledge as being mutually exclusive, but rather as complementary, and a number of points raised by both the elders of the community and the scientists opened paths to new joint observations.[9]

30. Traditional knowledge, gained through empirical study, contributes to the understanding of ecological systems gained by perceptive investigations. Moreover, traditional knowledge has been very useful in resource management, environmental preservation tasks, environmental assessment and development planning. To reach a more holistic understanding of our reality, both science and traditional knowledge should work together to provide solutions to current environmental challenges.

III. Protecting the Earth

31. At the 2015 interactive dialogue on Harmony with Nature, Ms. Kimmerer emphasized that the key to sustainability was no longer only about repairing damaged ecosystems and returning them to healthy, productive ones, "but, more importantly, about restoring our broken relationship with the land and with the environment and nature as a whole. If we are to survive, we need a change in worldview."

32. She said that "our current worldview that the Earth is our exploitable property needs to move towards an Earth-centred worldview in which respect towards the Earth can grow."[10]

33. From direct observations over millennia, generally transmitted orally between generations in cultures from around the world, different views of nature have been developed, embodying a wealth of wisdom and experience.[11]

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[8] See "From ethno-science to science, or 'What the indigenous knowledge debate tells us about how scientists define their project'", *Journal of Cognition and Culture*, vol. 4, Nos. 3-4 (2004).

[9] See Ming-Ko Woo and others, "Science meets traditional knowledge: water and climate in the Sahtu (Great Bear Lake) Region, Northwest Territories, Canada" Arctic, vol. 60, No. 1 (March 2007).

[10] Presentation available from http://harmonywithnatureun.org/content/documents/302Correcta.kimmererpresentationHwN.pdf.

[11] Fulvio Mazzochi, "Western science and traditional knowledge: despite their variations, different forms of knowledge can learn from each other", *EMBO Reports*, vol. 7, No. 5 (May 2006), pp. 463-466.

34. Today, traditional ecological knowledge is interpreted as a cumulative body of knowledge, practices and representations describing the relationships of living beings with one another and with their physical environment that evolved by adaptive processes handed down through generations.

35. Understanding how traditional knowledge is acquired and how it is passed on is key to understanding how holistic knowledge about systems can be generated. It also encourages all parties to be aware of the value that this approach to understanding nature will bring. In indigenous knowledge systems, there is no separation between secular and sacred knowledge and practice — they are one and the same, because matter is not seen as separate from spirit, but rather as being animated by spirit.

36. Ms. Kimmerer also said that balance in ecological systems arises from cycles of giving and taking, living and dying, production and consumption and biogeochemical cycles. She also highlighted that it is reciprocity that produces harmony with nature, and that positive feedback loops can produce radical change. The same is true for climate change. The rules that govern ecosystem functions must be taken into account. The proposed sustainable development goal 12 "ensuring sustainable consumption and production patterns", defines the need to ensure sustainable consumption and production patterns and underlines that, by 2030, the sustainable management and efficient use of natural resources should be achieved. Traditional ecological knowledge can offer insights into what sustainable consumption might look like through, for example, the indigenous canon of principles and practices that govern consumption, also known as the "honourable harvest".

37. The honourable harvest is a covenant of reciprocity between humans and the living world where humans use everything that they take and do not generate waste.

38. Another example of reciprocity derives from Native American cultures. The seventh generation principle, codified in the Iroquois Great Law of Peace, says that, in every decision, be it personal, governmental or corporate, we must consider how it will affect our descendants seven generations into the future. Because a generation is generally considered to be 25 years, that time frame would be 175 years. This corresponds to a definition of sustainable development given by the report of the World Commission on Environment and Development: Our Common Future (A/42/427, annex), which cautioned against compromising the ability of future generations to meet their own needs.

39. In the indigenous worldview, the land is alive and people are deeply connected to it.[12] By contrast, in modern culture this connection to the land has been lost. Only recently have more voices been heard about preserving the land. The late Tonya Gonnella Frichner, a lawyer and professor who became a global voice for Native Americans in forging common ground with the other indigenous peoples of the world and who participated in the fourth interactive dialogue on Harmony with Nature in 2014, said that, when water, air and lands are all contaminated, humanity as we know it will be gone. Mother Earth is a relative, not a resource.

[12] Tapestry Institute, "Indigenous Earth-based worldview" (available from http://tapestry institute.org/indigenousworldview.html).

IV. Customary law and nature

40. There are natural universal laws, defined in the philosophy of law, that are determined by nature, and are therefore universal.[13] Reciprocity forms part of natural universal laws, and is a consistent feature in codes of conduct of indigenous communities governing their interactions with the natural world. It is also a fundamental principle of customary law.

41. In customary law, reciprocal relationships, out of which the duty arises, result from a voluntary agreement between the parties affected. They create or acknowledge the duty of care. The reciprocal behaviour of the parties must, in some sense, be equal in value, meaning that the bond of reciprocity unites different people. In this regard, relationships within society must be sufficiently fluid so that the same duty one person owes another today may be reciprocated tomorrow. In other words, the relationship of duty must, in theory and in practice, be mutual.[14]

42. As a result, the principle of reciprocity is intimately woven into all actions undertaken by indigenous peoples, be it through their code of ethics, customary law or their relationships and interactions with the natural world. Therefore, any economic activity resulting from reliance on the natural world abides by such tenets as the above-mentioned honourable harvest and the seventh generation principle.

43. Over the course of time, many species of animals and plants have become extinct. In our contemporary world, climate change presents a further threat to the world's ecosystems. Many environmental lawyers and scientists believe that the fundamental principle upon which the modern environmental legal system has been built is the fact that humans have approached nature merely as a resource to be exploited for their own use. Fifth interactive dialogue panellist Maude Barlow, National Chairperson of the Council of Canadians and chair of the board of the Washington-based non-governmental organization Food and Water Watch, stated that, "in our world, nature is seen as a form of property." She also expressed the view that the existing laws to protect the environment and other species "just regulate the amount of damage that can be inflicted by human activity."[15] Environmental lawyer Mumta Ito, founder of the International Centre for Wholistic Law, believes that humans give value to nature as a resource for human consumption.

44. Many environmental lawyers and scholars from various social sciences believe that taking customary law into account could be used as a tool to preserve nature.

45. In line with this idea, a number of communities around the world are creating a new civil rights movement to preserve the Earth. Some are also calling for a universal declaration of the rights of Mother Earth.

46. The Gaia Foundation, in its statement at the fifth interactive dialogue, referred to Thomas Berry, a prominent cultural historian and geologist, who said that humans were all interconnected into an Earth community, and who urged humans to

[13] Heinrich Rommen, *The Natural Law: A Study in Legal and Social History and Philosophy* (Indianapolis, Liberty Fund, 1998).

[14] See Bruce L. Benson, *The Enterprise of Law: Justice without the State* (Independence Institute, 2011).

[15] Presentation available from http://harmonywithnatureun.org/content/documents/301presentation%20barlow.pdf.

preserve it. He argued that all life on Earth has an inherent right to exist, flourish and fulfil its function in the evolution of life, and that humans have a responsibility to ensure the health and integrity of Earth for future generations of all life. Inspired by the Earth-centred wisdom and practice of indigenous peoples and nature, he termed this philosophy of governance "Earth jurisprudence".

47. Recognition of Earth jurisprudence is the basis of the work undertaken by the Gaia Foundation, which has been helping indigenous and local communities to revive their Earth-based knowledge and practices and to secure legal recognition of their customary governance systems. Together, they have developed a holistic process called community ecological governance to strengthen local indigenous governance systems and rebuild community cohesion to enhance protection of ecosystems and territories from threats, including development and climate change. Traditional knowledge systems provide knowledge and ways of seeing that enable communities to interpret the laws of nature.

48. In response to the growing environmental threats, these communities have established multi-level precedents. For example, indigenous communities in the Amazon region of Colombia have secured recognition from the Government of Colombia and the United Nations Educational, Scientific and Cultural Organization as the legal guardians of the rainforests. Their ecological governance systems, derived from the laws of nature, have enabled them to live in these forests and to maintain diversity for thousands of years.

49. Common African customary laws for the protection of sacred natural sites, which recognize the Earth as the source of law, include sacred natural sites, similar to acupuncture points on the surface of the Earth. Sacred natural sites, seen as critical locations in the ecosystem, may be watersheds, forests or rivers, which must be respected as "no-go areas" for development if the health and integrity of the Earth and future generations of all species are to be maintained.

V. Shift in living and behaving

50. A fundamental shift in humankind's way of living and behaving is necessary if humans are to protect nature rather than continuing to deplete the planet. This requires a pivot towards sustainability in production and consumption systems and processes.

51. Mounting ecological crises, in particular global climate change, are already affecting the ability of the poor and most vulnerable to meet their basic needs for food, water and clean air, bringing to the forefront social, economic and environmental challenges worldwide. A universal, transformative post-2015 development agenda that does not leave anyone behind therefore needs to take these considerations into account.

52. The call for spiritual and ethical insight and guidance is now being heard more and more in many contemporary voices. On 28 April 2015, world leaders met at the Vatican for a conference on climate change. In their final statement, they declared that: "human-induced climate change is a scientific reality" and "its decisive

mitigation is a moral and religious imperative for humanity."[16] The statement also explained that humans had the technological and financial means not only to combat human-induced climate change but also to eliminate global poverty.

53. The Secretary-General, in his remarks at the climate change conference, commended Pope Francis and all faith and scientific leaders attending the workshop for raising awareness of the urgent need to promote sustainable development and address climate change.

54. The June 2015 encyclical letter "Laudato Si'", the first document in Vatican history to specifically address humanity's relationship with the environment, is a call to all people of conscience to work together to address the many challenges in our contemporary world.

55. Those challenges have also been addressed by the many experts in social sciences and other disciplines who have participated, over the years, in the interactive dialogues of the General Assembly on Harmony with Nature to commemorate International Mother Earth Day.

VI. Conclusion

56. In 2015, as the United Nations celebrates the seventieth anniversary of its founding, and as the Member States prepare to adopt the sustainable development goals as part of the new post-2015 development agenda, the time is right to commit to action to keep Earth healthy and viable for future generations.

57. Transitioning to a transformative way of thinking and a paradigm shift will require time, effort and creativity, and it will not happen all at once. However, by committing to a new way, rather than to an incremental improvement of the old one, stakeholders will send a strong signal for a change to more sustainable consumption and production patterns and a more planet-friendly and people-friendly approach to development.

58. In so doing, humanity would set out on a path to engage in a harmonious transformation, in which production processes would be inspired by the living world, where natural systems are engaged in a reciprocal relationships.

59. Nature needs to exist, flourish and thrive, as we humans do, and we must learn to coexist in a healthy, supportive, diverse and harmonious condition. Today, in the early years of the twenty-first century, we have an opportunity to restore our relationship with nature and to embark upon a collaborative endeavour to help humanity meet the challenges before it.

VII. Recommendations

60. **The significant impact of human activities on the Earth's systems has been widely acknowledged by international organizations, the international and scientific community, spiritual leaders and leading groups and stakeholders**

[16] Vatican Radio, "Final declaration on workshop on climate change", 28 April 2015 (available from http://en.radiovaticana.va/news/2015/04/28/final_declaration_on_workshop_on_climate_change/1140356).

worldwide, including the need to restore our relationship with nature, and to live in harmony with nature. Drawing on the foregoing discussions on this subject, the interactive dialogues of the General Assembly, the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", the many international policy documents adopted since 2012 and the post-2015 development agenda to be adopted at the seventieth session of the General Assembly in September 2015, Member States may wish to take into account the following recommendations:

(a) **Consider, within the deliberations of the General Assembly on sustainable development and the follow-up to the post-2015 development agenda, the Harmony with Nature approach outlined herein and in the previous reports on Harmony with Nature and the proceedings of the five interactive dialogues on Harmony with Nature to date;**

(b) **Invite the existing Harmony with Nature knowledge network of development practitioners, thinkers and academics who work in the natural and social sciences, including physics, chemistry, biology, ecology, economics, sociology, law, ethics, spirituality, anthropology, medicine and linguistics, to advance the conceptualization of sustainable living in harmony with nature, relying on current scientific information, in particular from centres of excellence on environmental, social and economic sciences;**

(c) **Showcase and support, through the Harmony with Nature website (www.harmonywithnatureun.org), the work being undertaken by Member States, major groups and other stakeholders, and the growing knowledge network on the subject, in order to develop holistic and integrated approaches and actions aimed at sustainable living in harmony with nature.**