

Some Thoughts on the Manifesto for Earth

by Ted Mosquin

Ted Mosquin grew up on a small farm in eastern Manitoba and has been a naturalist since childhood. He received a B.Sc.(Hons.) degree from the University of Manitoba in 1956, and a Ph.D in Botany at the University of California in 1961. He served as President of a number of Canadian environmental organizations, including The Canadian Nature Federation and The Canadian Parks and Wilderness Society. Dr. Mosquin also served as a member of the Canadian government's Biodiversity Convention Advisory Group, as well as the Convention on Biological Diversity. He has been the editor of several publications, is the author or co-author of four books, and over 100 scientific and popular articles in systematics, ecology and natural history.

The 'Manifesto for Earth' was first published in March 2004 ⁽¹⁾. It is a unique document in the world's literature on ethics because it presents the first wholly ecocentric perspective on the value of planet Earth and its evolved ecosystems. I think that an understanding of the scientific foundations of ecocentric ethics provides the essential prerequisite as well as a necessary basis for finding solutions to the otherwise seemingly intractable emerging global ecological catastrophe.

Sadly, the co-author Stan Rowe, died quite suddenly in 2004 only a few days after he received the published text of the Manifesto. The wonderful literary quality of the Manifesto's text is a tribute to Stan's writing talents. I feel highly privileged to be the co-author with Stan because he was an outstanding holistic ecologist and environmental philosopher from whom I learned so much. Stan was a lifelong friend so I know that he would happily agree that I speak here for both of us. Sections of text in each of the Principles below are identical or similar to that of the Manifesto while Principle No. 8 which deals with human population size has been significantly expanded.

Why Another Manifesto?

Some reviewers of the early drafts of the Manifesto pointed out that humanity already has a half dozen Charters, Proclamations, Platforms, Declarations and the like and suggested to the authors that we explain why yet another of these kinds of texts was needed. The answer is that all these earlier attempts are thoroughly or partly anthropocentric in that they place humans rather than the living Earth at the centre of value. They reflect a deeply embedded anthropocentrism, seeing the world of Nature as being valuable only to the extent that it served some human purpose. Hence, the Manifesto was written to fill

this gap in the literature on environmental ethics by explaining the ecological basis for the ecocentric Worldview.

As authors we saw ourselves as writing it from a distance...as if we were not participants in the processes of the Ecosphere.. as if we were standing on the Moon while gazing at Earth and having in our minds the accumulated experience of two lifetimes of living on Earth plus the evidence of 200 years of science. When all was said and done, only 11 Principles emerged, no more no fewer. These naturally and logically fell into two distinct categories, the first

6 are called CORE Principles. These describe the way things are on this Earth as witnessed by our experience, senses and findings using the methods and instruments of science. The second group called ACTION Principles describe the consequential ethical obligations or duties that naturally flow from the first six. A guiding question repeatedly asked was “is a Principle missing?” In the end we found that we had six IS Principles and five OUGHT Principles..

The Manifesto shifts humanity's value focus from the obvious importance of ourselves as a unique and prodigal species created by the generative Ecosphere – to the supporting context without which organisms would never have been able to evolve and live. **What is required is an outward shift in focus from homocentrism to ecocentrism, providing an external ethical regulator for the human enterprise. Without an ecocentric perspective that anchors values and purposes in a greater reality than our species, the resolution of political, economic, and religious conflicts will be impossible.**

In philosophical parlance the Manifesto deals with three things. First, with ontology ...or, what's reality? ..the Manifesto takes the view that our immediate reality is the Earth and its Ecosphere with all us organisms in it, and the entire system energized by sunlight. Second, epistemology, that is, how do we know reality? The Manifesto says that it is by our perceptions in a science kind of way..essentially the natural history and science story of Earth. Third, it is about ethics, namely, as a consequence of the nature of reality as revealed by science, what then must we humans value most and should we act on those values? The Manifesto is not based on contrived or ‘other worldly’ notions or assumptions about the reality in which we live. It is a secular document, as indeed it should be as otherwise it could not be objective.

SIX CORE PRINCIPLES

Principle 1. The Ecosphere is the Center of Value for Humanity

This first Principle recognizes that it is the innate

generative nature of the Earth's Ecosphere that is the source and origin of all evolutionary creativity. Hence, marine, freshwater and terrestrial ecosystems as expressed in all parts of the Ecosphere, exceed in value the importance of the species they contain. The large majority of humans, however, do not sense or know this. For most persons, ecological reality, or our outer being is taken for granted and its importance largely unsensed while the amount of time and resources lavished on humanity's inner being draws almost infinite attention and resources. Millions of books, megawatts of media attention are devoted to people alone, as if our importance can be judged apart from the context which created us. This blind belief is of course the curse of anthropocentrism, sometimes called homocentrism. This “humans *uber alles*” fixation and attitude draws attention away from the ecological needs of the planet and neglects the importance of the Ecosphere. It's a doctrine of species-chauvinism that ignores the over arching value of the natural world and is at the root of the ongoing destruction of Nature.

The idea that organisms are more important than Earth's Ecosphere, called biocentrism, marks an advance in ethics but the scope of this philosophy is limited because it fails to recognize the importance of the total ecological “surround” which is the part that has within itself the power of generating organisms, complexity, profound natural beauty and harmony that we see in Nature everywhere. Overwhelming evidence points to the Ecosphere as the primary Life-Giving System rather than merely life's support. Hence, ecocentric ethics (or sometimes called “Earth Ethics”) provides the standard to which humanity must appeal for guidance regarding new legislation on population, consumption, pollution, politics, education, people management, laws, etcetera.

Principle 2. The Creativity and Productivity of Earth's Ecosystems Depend on their Integrity

Ecological integrity is a vital characteristic of healthy ecosystems. The term ‘ecological integrity’ came into use in the 1980s and has been incorporated, for example, into our National Parks Act and the Earth Charter⁽²⁾. Integrity refers to wholeness, to

completeness, health, harmony, and to the ability to function fully. The standard is Nature's sun-energized ecosystems in their undamaged state. A key expression here is "ecosystem standards" Why insist on them? Wes Jackson, a soil scientist in Kansas explains: "Because they can be sustained on contemporary sunlight without a measurable draw down of the capital stock of the planet." An ecosystem has integrity when the many species that we humans found upon our arrival at any place of the planet are still present. Hence the ecological functions which they provide to each other and the ecosystem in whose processes they participate have not been degraded or destroyed. Integral natural ecosystems provide the only blueprints for sustainability in agriculture, forestry and fisheries. As models of sustainability they have been tested over the eons. In contrast, technological models of sustainability are neither stable nor time tested.

Today we see the effects of deteriorating ecosystem integrity over enormous parts of Earth. The evolutionary creativity and continued productivity of Earth and its regional ecosystems require the continuance and/or restoration of their key structures and ecological processes. Integrity depends on intricate food webs and energy flows, on cycling of essential materials, on decomposition, herbivory, communications and a dozen other major functions ⁽³⁾.

Principle 3. The Earth-centered Worldview is supported by Natural History

Natural History is the story of Earth's unfolding. Cosmologists and geologists tell of Earth's beginnings more than four billion years ago, the appearance of small sea creatures in early sediments, the emergence of terrestrial animals from the sea, the Age of Dinosaurs, the evolution with mutual influences of insects, flowering plants and mammals from which, in recent geological time, came the Primates and humankind. We share genetic material and a common ancestry with all the other creatures that participate in Earth's ecosystems. Such compelling narratives place humanity in context. Stories of Earth's origins over the eons trace our coevolution with myriad companion organisms through compliance, and not solely through competitiveness. The facts of organic

coexistence reveal the important roles of mutualism, cooperation, and symbiosis within Earth's grand symphony.

Cultural myths and stories that shape our attitudes and values tell where we came from, who we are and where in the future we are going. Unfortunately, these stories have been unrealistically homocentric, contrived, and/or other worldly. In contrast the evidence-based, outward looking narrative of humanity's natural history....made from stardust, gifted with vitality and sustained by the Ecosphere's natural processes, is not only believable but also more marvelous than traditional human-centered myths. By showing humanity in context, as one organic component of the planetary globe, ecocentric narratives also reveal a functional purpose and an ethical goal; namely the human part serving the greater Earth whole.

Principle 4. Ecocentric Ethics are Grounded in Awareness of our Place in Nature

Ethics concerns those unselfish attitudes and actions that flow from deep values; that is, from the sense of what is fundamentally important. A profound appreciation of Earth prompts ethical behavior toward it. Veneration of Earth comes easily with out-of-doors childhood experiences and in adulthood is fostered by living-in-place so that landforms and waterforms, plants and animals, become familiar as neighborly acquaintances. The ecological worldview and ethic that finds prime values in the Ecosphere draws its strength from exposure to the natural and semi-natural world, the rural rather than the urban milieu. Consciousness of one's status in this world prompts wonder, awe, and a resolve to restore, conserve, and protect the Ecosphere's ancient beauties and natural ways that for eons have stood the test of time.

Planet Earth and its varied ecosystems with their matrix elements—air, land, water, and organic things—surrounds and nourishes each person and each community, cyclically giving life and taking back the gift. An awareness of self as an ecological being fed by water and other organisms, and as a deep-air animal living at the productive, sun-warmed interface where atmosphere meets land, brings a sense of

connectedness and reverence for the abundance and vitality of sustaining Nature.

Principle 5. An Ecocentric Worldview Values Diversity of Ecosystems and Cultures

A major revelation of the Earth-centered perspective is the amazing variety and richness of ecosystems and their organic/inorganic parts. The Earth's surface presents an aesthetically appealing diversity of arctic, temperate and tropical ecosystems. Within this global mosaic the many different varieties of plants, animals, and humans are dependent on their accompanying medley of land forms, soils, waters and local climates. Thus biodiversity, the diversity of organisms, depends on the maintenance of the diversity of ecosystems. Cultural diversity—a form of biodiversity—is the historical result of humans fitting their activities, thoughts and language to specific geographic ecosystems. Therefore, whatever degrades and destroys ecosystems is both a biological and a cultural danger and disgrace. An ecocentric worldview values Earth's diversity in all its forms, the non-human as well as the human.

Each human culture of the past developed a unique language rooted aesthetically and ethically in the sights, sounds, scents, tastes, and feelings of the particular part of Earth that was home to it. Such ecosystem-based cultural diversity was vital, fostering ways of sustainable living in different parts of Earth. Today the ecological languages of aboriginal people, and the cultural diversity they represent, are as endangered as tropical forest species and for the same reasons: the world is being homogenized, ecosystems are being simplified, diversity is declining, variety is being lost. Ecocentric ethics challenges today's economic globalization because it ignores the ecological wisdom embedded in diverse cultures, and for short-term gain destroys these cultures.

Principle 6. Ecocentric Ethics Supports Social Justice

It's a given that many of the injustices in human societies are caused by inequality. As such they comprise a subset of the larger injustices and inequities visited by humans on Earth's ecosystems and their species. With its extended forms of

community, ecocentrism emphasizes the importance of all interactive components of Earth, including many whose functions are largely unknown. Thus the intrinsic value of all ecosystem parts, organic and inorganic, is established without prohibiting their careful use. "Diversity with Equality" is the standard: an ecological law based on Nature's functioning that provides an ethical guideline for human society.

Social ecologists justly criticize the hierarchical organization within cultures that discriminates against the powerless, especially against disadvantaged women and children. The argument that progress toward sustainable living will be impeded until cultural advancement eases the tensions arising from social injustice and gender inequality, is correct as far as it goes. What it fails to consider is the current rapid degradation of Earth's ecosystems that increases inter-human tensions while foreclosing possibilities for sustainable living and for the elimination of poverty and injustice. Social justice issues, however important, cannot be resolved unless the hemorrhaging of Earth's ecosystems is stopped and reversed.

THE FIVE ACTION PRINCIPLES (duties that follow from Principles 1 through 6)

Principle 7. Defend and Preserve Earth's Creative Potential

This is the ethic that flows naturally from Principle No. 1. Since Earth is the centre of values for humans, it follows that we should feel a duty to defend and preserve its creative (evolutionary) potential.

The innate generative powers of the Ecosphere are expressed through its resilient geographic ecosystems. Therefore, as first priority, the ecocentric philosophy urges preservation and restoration of natural ecosystems and their component species. Barring planet-destroying collisions with comets and large asteroids, Earth's evolving inventiveness will continue for millions of years, hampered only where humans have destroyed whole ecosystems by exterminating species or by toxifying sediments, water and air. The permanent darkness of extinction removes strands in the organic web, reducing the beauty of the Earth and

the potential for the future emergence of unique ecosystems with companion organisms, some possibly of greater-than-human sensitivity and intelligence.

Aldo Leopold said that: “The first rule of intelligent tinkering is to save all the parts.” But humans today are not just tinkering, we are destroying Nature on a huge scale. Actions that unmake the stability and health of the Ecosphere and its ecosystems need to be identified and publicly condemned. Among the most destructive of human activities are militarism and its gross expenditures, the mining of toxic materials, the manufacture of biological poisons in all forms, industrial farming, industrial fishing and industrial forestry. Unless curbed, lethal technologies such as these—justified as necessary for protecting specific human populations, enriching special corporate interests, and satisfying human wants rather than needs—will lead to ever-greater ecological and social disasters.

Principle No. 8. Reduce Population Size

The Manifesto does not shy away from dealing directly with the matter of human population overshoot. The reality of our time is that our human monoculture is overwhelming and destroying Nature's polycultures. The widespread use of the term “sustainability” is nothing but a hollow shell, and assumes no obligation to retain Nature's polycultures.

Ecocentric ethics that value Earth and its evolved systems over species, condemns the social acceptance of unlimited human multiplication and fecundity. The need to reduce numbers is greatest in wealthy countries where per capita use of energy and Earth materials is highest.

The Manifesto for Earth estimates the maximum sustainable limit for world human population as ‘**one billion or less**’. This estimate is consistent with the ecological reality of the planet and with the idea that there can be little or no social justice among peoples, particularly on a depleted and degraded Earth. Principles 1 through 6 of the Manifesto provide the ecological and social justice framework for the ‘one billion or less’ estimate. This number was not pulled

out of the air; it is based on evidence and on several specific rationales which show that major reductions of human population are desirable, necessary, and credible. Seven ecological reasons follow:

1) Population Overshoot. ‘The biological phenomenon of ‘population overshoot’ is used by ecologists to describe a species whose numbers exceed the ecological carrying capacity of the place where it lives. We humans are in a state of overshoot on Earth. It is the discovery and use of vast fossil fuel energy that has enabled human numbers to reach the 6.5 billion level of overshoot. Some thousands of years ago, growth in human numbers was readily sustained by displacing other species from land areas, but in the past two hundred years, humanity has expanded enormously based on a much more precarious practice of rapidly drawing down finite natural resources, many of which are becoming scarce or depleted. The knowledge of the human ecological predicament has been clearly articulated during the past fifty years, but the response has been to deny it and to continue the ceaseless search for more energy and to increase human numbers and consumption and placing in peril the orderly functioning of the Ecosphere.

Overshoot assesses the relationship between humanity and the rest of the Ecosphere, a relationship that is now becoming radically out of balance, as witness large-scale contamination of food webs, destruction of valued resources, extinctions of species, global warming, and the like. As humans go deeper into overshoot, the consequences to Earth's evolved life-support systems are becoming ever more severe. Growing shortages of essential resources are already leading to impoverishment of populations. The harsh effects can be mitigated by a reversal of present day policies of promoting ever more economic growth; good choices can still be made to reverse local, regional and global trends.

2) Social Justice. When scientists warn that humans are demanding more than the Earth can provide sustainably over the long-term, there are those

who claim that any reduction of production will fail to meet the needs and wants of a rapidly growing population and therefore will diminish conditions required for social justice. These are two distinct issues. Social justice is internal to the human family and stems from the genetic predisposition of human beings as a social species to share (or hoard) what we can glean from the Ecosphere. Ultimately, higher standards of social justice depend upon radical reductions of human numbers and demands coming safely within the bounds of what Earth's Ecosphere can provide sustainably over the long-term. Sustainable solutions can be found only by emulating the many successful ways and methods that Nature has refined over eons.

- 3) **Terrestrial and Marine Ecosystems Required to Restore Planetary Sustainability.** Today, the world's fish, forests, and agricultural lands are being depleted; toxification of soils, waters and organisms is continuing to increase with no sign of ending. Huge regions are experiencing desertification. In view of these negative trends, what percentage of Earth's 'geo-ecosystems' should be protected or restored so that they can return to ecological sustainability? Some holistic ecologists (Eugene Odum, for example) have proposed 50% of each of Earth's major ecosystems be retained/restored to naturally functioning systems, leaving 50% modified to various degrees by human activities (agriculture, cities, industry). Others have proposed 1/3 natural, 1/3 with small settlements, organic agriculture and 1/3 for urban areas, agriculture, industry. Realistically, all of these scenarios and others like them do require an enormous reduction in population size.
- 4) **Studies of CO₂ Emissions.** Yet another ecological rationale for the less than one billion maximum figure comes from studies of per capita CO₂ emissions in different countries. This assumes that present levels of CO₂ are already far in excess of what should be a global norm and hence need to be drastically reduced to prevent the accelerating large scale destruction of

terrestrial and marine ecosystems and their evolved biodiversity. One example of conclusions drawn is that Canada's population should not exceed 6 million (about 1/6th of present population). This bit of ecological calculation was not considered by the authors of the Manifesto. Yet it is in accord with the conclusion that a sustainable world population would be 1/6 or less of the present day number.

- 5) **Number of Earth's Required by Humans.** Ecologists estimate that in order to satisfy the consumption desires of the 6.5 billion people who now inhabit the planet, two to four Earths would be required. The reality today is that well over two billion of the world's poor people also cause major ecological impacts, including extensive deforestation, desertification, soil erosion, depletion of fisheries, with attendant misery and poverty. Another reality is that huge populations not yet living at western life styles are aspiring to do so, with China, India and Indonesia being three examples. At the same time, there is scant evidence that the differential between western life styles and those of up-and-coming nations will narrow. Considering this complex global human predicament, and also considering that there is no chance for additional Earths to be found, it follows that human population should be adjusted to fit on the one Earth that actually exists.
- 6) **The Early mid-19th Century Benchmark for Ecological Sustainability.** The authors of the Manifesto asked: when were human numbers still in relative balance with the Ecosphere's ability to sustain them without undermining the Earth's time-tested capacity for regeneration and renewal? The time was roughly at the beginning of the Industrial Revolution early in the 19th Century, when human population was around 950 million, one seventh of today's numbers. Other estimates by scientists have been both higher and lower.
- 7) **The issue of Ethical Guidance.** Finally, there is a matter of ethical guidance. It is simply wrong for humans to multiply their numbers to the point

where vast regions of land and sea are usurped and allocated for exclusive human exploitation and utilitarian uses. It is also profoundly wrong to continue on the path of exterminating thousands of other evolved species. The emerging field of ecological ethics has much to say on this topic and here I highly recommend a new small book by Patrick Curry⁽⁴⁾.

An important question asked by the authors of the Manifesto: How will a reduction of human numbers down to less than one billion be accomplished? The Manifesto says that it will be accomplished by shifting from today's homocentric worldview to the ecocentric one as described in the Manifesto, and of necessity, by intelligent policies—or inevitably by plague, famine, warfare and other forms of misery.

Principle 9. Reduce Human Consumption of Earth's Parts

The chief threat to the Ecosphere's diversity, beauty and stability is the ever-increasing appropriation of the planet's goods for exclusive human uses. Such appropriation and over-use, often justified by population overgrowth, steals the livelihood of other organisms. The homocentric view that humans have the right to all ecosystem components—air, land, water, organisms—is morally reprehensible. Unlike plants, we humans are "heterotrophs" (other-feeders) and must kill to feed, clothe and shelter ourselves, but this is no license to plunder and exterminate. The accelerating consumption of Earth's vital parts is a recipe for destruction of ecodiversity and biodiversity. Wealthy nations armed with powerful technology are the chief offenders and best able to reduce consumption and share with those whose living standards are lowest, but no nation is blameless.

The "eternal growth" ideology of the market must be renounced, as well as the perverse industrial and economic policies based on it. The Limits to Growth thesis is wise as members of the Canadian Association for the Club of Rome understand better than others. One rational step toward curbing exploitive economic expansion requires the ending of public subsidies to those industries that pollute air, land or water and/or destroy organisms and soils. A

philosophy of symbiosis, of living compliantly as a member of Earth's communities, will help with the restoration of productive ecosystems. For sustainable economies the guiding beacons are qualitative, not quantitative.

A central problem with technology is that of increasing efficiency. When the application of technology increases efficiency it increases the demand for Earth's parts, and consumption of resources goes up not down.

Principle 10. Promote Ecocentric Governance (law)

Homocentric concepts of governance that encourage over-exploitation and destruction of Earth's ecosystems must be replaced by those beneficial to the survival and integrity of the Ecosphere and its components. Advocates for the vital structures and functions of the Ecosphere are needed as influential members of governing bodies. Such "ecopoliticians," knowledgeable about the processes of Earth and about human ecology, will give voice to the voiceless. In present centers of power, "Who speaks for wolf?" and "Who speaks for temperate rain forest?" Such questions have more than metaphorical significance; they reveal the necessity of legally safeguarding the many vital non-human components of the Ecosphere.

A body of environmental law that confers legal standing on the Ecosphere's vital structures and functions is required. Country by country, ecologically responsible people must be elected or appointed to governing bodies. Appropriate attorney-guardians will act as defendants when ecosystems and their fundamental processes are threatened. Issues should be settled on the basis of preserving ecosystem integrity, not on preserving economic gain. Over time, new bodies of law, policy, and administration should emerge as embodiments of the ecocentric philosophy, ushering in ecocentric methods of governance. Implementation will necessarily be step by slow step over the long term as people test practical ways to represent and secure the welfare of essential, other-than-human parts of Earth and its ecosystems.

Principle 11. Spread the Message (education!)

Those who agree with the preceding principles have

an ethical duty to spread the word by education and leadership. The initial urgent task is to awaken ever more people to their functional dependence on Earth's ecosystems as well as their bonds to all other species. The understanding and acceptance of the ecocentric worldview and a shift toward ecocentric ethics will provide an external guide to the duties and obligations for actions, living and public policy. Such a shift toward ecocentrism signals what must be done to perpetuate the evolutionary potential of a beautiful Ecosphere. It reveals the necessity of participating in Earth-wise community activities, each playing a personal part in sustaining the marvelous surrounding reality. It reveals the path toward green citizenship.

The Manifesto for Earth is not anti-human, though it rejects chauvinistic homocentrism. By promoting a quest for abiding values—a culture of compliance and symbiosis with this lone Living Planet—it fosters a unifying outlook. The opposite perspective, looking inward without comprehension of the outward, is ever a danger as warring humanistic ideologies, religions and sects clearly show. Spreading the ecological message, emphasizing humanity's shared outer

reality, opens a new and promising path toward international understanding, cooperation, stability and peace.

References

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- (2) *The Earth Charter, 2000*. Published by the United Nations.
- (3) Mosquin, Ted, 2000. *The Roles of Biodiversity in Creating and Maintaining the Ecosphere*. In Stephen Bocking, Editor, *Biodiversity in Canada: Ecology, Ideas and Action*. Broadview Press, Peterborough, Canada. 426 pp.
- (4) Curry, Patrick, 2006. *Ecological Ethics*. Polity Press, UK. 173 pp.

Note: A collection of Stan Rowe's more recent writings is being edited for publication in a new book: "Earth Alive!" The book will be published by NeWest Press, Edmonton in May, 2006. 'The Manifesto for Earth' is included as one of its chapters.

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