



Listening to the Earth:

What the Artists and Scientists Tell Us

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Abstract:

This is a time of cataclysmic climate change, with raging fires across the western US landscape, the threat of life-threatening floods to coastal regions worldwide, and numerous other effects. A basic premise of this paper is that in searching for remedy, we must listen to the Earth, and through listening, discover what it is that ails the planet, and seek restorative action. Our journey in this article takes us into the realms of poetry, philosophy, and restorative justice, as well as the science of ecology. Ecosystems theory, an approach that unites truths from both art and science, is the guiding framework for this paper.

As citizens of Mother Earth, whose welfare depends on the health of the world around us, we can look to nature to be our teacher. As stated in the King James Bible:

But ask now the beasts and they shall teach thee;

And the fowls of the air, and they shall tell thee;

Or speak to the earth, and it shall teach thee.

Job 12:7-8

Listening to the Earth from Childhood and Beyond

To hear a brook is to hear babbling. To hear the wind is to hear rustling (van Wormer & Best horn, 2018). Consider the familiar sounds of nature through the seasons: the chirping of birds in springtime, the whining of locusts and other insects late in summer, and at times, the bursts of thunder that accompany rain pounding on the roof. Autumn brings with it the crinkling of leaves underfoot, and the whistling of the wind. In comparison, winter is quiet and still, with animal and plant life seemingly dormant until the lively awakening of spring.

When we think of listening, we think of being attuned to sound, and responding accordingly. For the purposes of this paper, however, I am using the term listening in the broader sense of more than the mere physiology of hearing. To heed the “voice of the Earth,” for example, is a saying consistent with the teachings of ecologist Gregory Bateson (1972), who urges us to draw on our senses as well as our minds as we seek the wisdom that our biological world contains?

Listening involves responding to stimuli at a deep level, and attuning ourselves to the message. In his paper “A Listening Ecology: Tuning into the Environment, Saving the Planet,” communications expert Michael Purdy (2019) utilizes an expanded definition of listening, consistent with the concept used here. Consider a spring garden newly buzzing with life. What we hear may be thus enhanced by what we see, smell, and feel, as well. The divergent senses, as David Abram (1997) suggests, join and dissolve into one another. From his perspective, the audible is not separate from the visible; our sensing body is an open circuit to the world. Abram conceives of our ears as well as our eyes as the gates through which our body receives nourishment from outside.

What are the typical sights of nature? For several weeks in the fall, the maple trees are ablaze with color—bright yellows and reds—perhaps against a backdrop of dark green pines.

This display of colors is a prelude to the bleakness to come in the rather long period before the snow begins to fall. There is so much to see and hear in nature; the sights and sounds reinforce each other, and aid in our appreciation of landscapes and sounds capes that vary starkly north and south, and also by elevation. Much of the joy of travel comes from seeing this variety in scenery.

Children who spend much time out of doors in natural settings become attuned to the sounds, as well as the sights and scents, of nature. In *A Child's Garden of Verses*, Robert Louis Stevenson (1999/orig. 1909) famously captured the child's joy in exploring the natural world, a joy found simply in hearing the wind:

Oh wind a-blowing all day long

Oh wind that sings so loud a song. (p.28)

Stevenson was aware, even in the early 1900's; of a pending threat to the natural world he so loved. This was the threat brought about from growing industrialization and its impact on the natural environment. He had strong reservations about modernization, a view that was reminiscent of that of the Romantic poets a century before. William Wordsworth, for example, had expressed concern with a world that "is too much with us, late and soon" (in Appelbaum, 1992, p. 52). He sought otherworldly pleasures, and found these in nature. Wordsworth's poems have a spiritual quality; indeed, he found a "Presence" in nature. We can share his joy in spring in his most familiar poem, "Daffodils" (Wordsworth, 2009/orig.1807, p.47). Contrast his sensory experience as his "heart leaps up" when he beholds "a host of golden daffodils" with the experience of walking along a busy street. This situation is one geared to high stress—the noise of rushing traffic, the banging of construction workers, the roar of engines, and the smell of truck and car fumes.

Already in their day, both Stevenson and Wordsworth, although generations apart, saw in industrialization and materialism a threat to rural life. Central to the industrial age was the notion that progress derives from subduing nature and exploiting the Earth's natural resources. This viewpoint dominates today under the ideology of free-market commerce, in which natural resources are exploited for short-term profit. In our race to discover ever newer technologies, argues Abram (1997), we get shut off from earthly life. He describes the amazement he and others experienced following the loss of electrical power after a hurricane when they went outdoors and were alerted to sounds of which they had been unaware before— "the ripples of bird song in the still-standing trees" (p. 64). The loss of technology had forced a return to the senses that had only been at the fringes of awareness before.

This glory in the fruits of nature as opposed to obsession with the latest technological advances is consistent with the heightened conservation movement much in evidence today. The modern environmental movement got its start during the early 1960s, in an age of unquestioning faith in new technological advances. Within this context, and at great personal cost, emerged a scientist whose role was to ask the forbidden questions. Let us now turn to science to discuss a body of empirical research constructed by a courageous woman who was inspired by simply listening to nature.

Silent Spring by Rachel Carson

Beautifully written by marine biologist Rachel Carson (1962), *Silent Spring* documented the adverse effects excessive pesticide use on the environment, as well as on human and non-

human life. The landmark publication of this book, by a woman who was far removed from the scientific establishment, is said to mark the beginning of the environmental movement.

“There was once a town in the heart of America where all life seemed to live in harmony with its surroundings” (p. 1), *Silent Spring* begins. Following a detailed description of the beautiful landscape of this town, Carson describes a strange blight that crept over the area, until everything was changed. “It was a spring without voices. On the mornings that had once throbbed with the dawn chorus of robins, catbirds, doves, jays, wrens, and scores of other bird voices, there was no sound; only silence lay over the fields and woods and march” (p.2).

Carson’s documentation of how chemical companies threaten the ecosystem and human health led to the establishment of the Environmental Protection Agency under President Nixon in 1970. Use of the pesticide DDT was eventually banned in the United States, but not until after Carson was vehemently criticized by chemical corporations, such as DuPont.

I chose to highlight this important book not only because of its significance to the environmental movement, but also for another reason—because of the key role it accords to sound. When Carson listened to the Earth, she knew that all was not well, and that we were on a path to destruction. She also knew as a scientist of what had “silenced the voices of spring” (p.3), and of the need to write a book (as well as research papers) to explain to the public what was happening and the urgent need to stop it. Written in an easy-to-read style, *Silent Spring* is widely considered one of the groundbreaking science books of all time. In it, Carson related the loss of healthy sounds to the loss of the ecosystem in which we live.

The Earth as Ecosystem

Widely used as a metaphor for the complexity found in nature, ecosystems theory derives from biology, the most humanistic of the sciences. Bateson (1972), in his chapter “conscious purpose versus nature,” perceives the world in terms of a vast ecosystem. An ecosystem, as he describes it, is composed of subsystems, each of which contains ever smaller systems embedded within the whole. Following Bateson, we can characterize these various systems, each with its own structure and function, as working together in a complementary fashion. External forces, however, can disturb their balance, or there may be turbulence of some sort from within, and weaker elements may be eradicated. Not everything in nature is as beautiful, or even as harmonious, as the Romantic poets would have us think. And yet, due to evolutionary forces, there is a certain balance in nature, equilibrium in plant and non-human animal life that is remarkable. There is also a solace that humans can find in nature if they search for it, a solace not often found in a daily commute through heavy traffic during rush hour.

The balance one finds in nature is prone to disturbance in the wild, such as through a natural disaster or an invasion by a predator. Then the rhythm of life in that area at that time may be forever affected. But even more severe is the impact of human-produced interventions, whose repercussions often are serious, and whose consequences unintended. Take the rechanneling of the Mississippi river as an example. For thousands of years, deposits of nutrients had built up the soil and maintained the land in the lower Mississippi region. When levees were built, the flow of water was shifted, and the river’s natural cycle was disrupted. Now the sediment that once built this land is lost in the deep waters of the Gulf of Mexico. Without land-building sediment from the river, the delta is doomed to continue shrinking, leading to the sinking of land and exacerbation of the risk of flooding.

The rising of oceans is another human-induced factor in the loss of wetlands.

Consider how the warming of the oceans, a major consequence of climate change, will impact the ecosystem. As the temperature of the oceans rises, fish and other species move to colder waters. At the Polar Regions, the expansion of the Arctic Sea leads to the extinction of animal life dependent on ice floes for survival. Then people in turn dependent on this animal life are forced to migrate southward. With more water entering the oceans from the melting ice, coasts are gradually submerged. Environmental refugees from low-lying countries such as Bangladesh will flee to neighboring countries, causing massive disruption in these already overpopulated nations. These are just a few of the possible ramifications of one change—an increase of the Earth’s temperature, with repercussions that ricochet from one effect to another. Environment, plant, animal, and human life, and the economy, are all intertwined. One can easily see in our economic interconnectedness our ecological interconnectedness, as well.

Significantly, much of the cause of climate change is economic, and is related to industrial advances, such as automobile manufacturing, fracking, coal mining, monoculture agriculture, and industries that pollute the air, water, and soil. Economic growth, which may involve the cutting down of trees, is not the same as sustainable growth, which might involve planting a forest.

The more we study the major ecological problems of our time, notes Frito Capra (1997), the more we come to realize that they cannot be understood in isolation. Problems such as overpopulation and poverty are often intertwined. A worldview that studies phenomena singly is anachronistic, and built on a shallow faith in materialism. Instead, as Capra argues, we should recognize and adopt a holistic worldview to see the world and its elements as integrated.

Evidence of the intensifying conflict between short-sighted economic interests and a healthy ecosystem can be seen in the dust bowl emerging in China; in the burning rainforests of Indonesia; in the collapsing cod fishing industry in the North Sea; in falling crop yields in Africa;

and in the falling water tables of India. In the long run, sound economic interests require respect for the environment. Lester Brown (2009), the founder of the World watch Institute and author of *Eco-Economy*, argues compellingly that the global economy will suffer from our inattention to the health of our habitat. We must be prepared, he further argues, to restructure the global economy to make it compatible with the Earth's ecosystem, for to see the depletion of much of the Earth's capital in the name of economic progress is not progress at all. Fortunately, economists are becoming more ecologically aware, and are gradually beginning to acknowledge the dependence of the economy on the Earth's ecosystem. Encouragingly, there is now heavy investments in electric cars and city buses, as well as in solar energy. Others, however, take the effects of global warming as inevitable, and are putting their money in sea walls and similar devices to protect against rising coastal waters, indoor agriculture to protect against unpredictable weather patterns, desalination plants for drought-prone regions, and even land far from the ocean for when rising seas shift the real estate market (Lavelle, 2018). These investors take an "ecosystems approach" by investing in every aspect of the system that is expected to drive a market to deal with sudden and extreme crises.

Ecosystems perspectives help us grasp the importance of changes to nature, and to visualize how a change in one part of the system reverberates throughout the whole. Conceiving of the Earth as one giant ecosystem and focusing on the equilibrium among the Earth's plants and creatures does not mean that if humans cease their harmful operations, the balance will

automatically be restored. Restoring a life-giving balance would require pro-active interventions so that the damage can be undone. The contamination caused by the mass deposit of plastics in the ocean, for example, will still be there for ages to come.

Failure to Heed the Call

The quality of natural sounds has given way to mere noise as the Earth is paved over with roadways and parking lots. Our societies are paying a high price for having followed policies of economic development that operate at the expense of social development and the protection of nonrenewable resources. The smog of Eastern Europe, the eroded hillsides of Nepal, the toxic waste sites of Russia, and the denuded forests of Brazil and the Pacific West Coast testify to this massive destruction.

A US government report, Volume II of the National Climate Assessment, which is mandated by Congress to be issued every four years, was released in late November, 2018. Written by the nation's top environmental scientists, the report summarizes the latest findings, and issues a dire warning on climate change, which is occurring faster than at any point in the history of civilization. Although issued from the government, the conclusions of the report are in contradiction to statements by the Trump administration (Harsher, 2018). The US is warmer today than it was 100 years ago, with summers characterized by periods of extreme heat waves, and the oceans have risen on average nine inches over the last century. The change in climate is associated with extreme shifts in weather, further damage to air quality, the spread of new airborne diseases by insects and pests, and changes to the availability of food and water. Wildfires, such as the one that wiped out Paradise, California, are expected to grow in intensity

and to affect the Eastern as well as Western regions. Also, catastrophic rains during summer thunderstorms are already saturating towns in America's Northeast and Midwest.

A major impact on the ecosystem comes with the loss of biodiversity in plant and animal life. In the space of about 200 years, nearly three times as many bird and animal species have

disappeared as existed before. This is a major concern of the world's environmental scientists. A U.N. report on global biodiversity decries the loss of genes, habitats, and ecosystems (Secretariat of the Convention on Biological Diversity, 2014). Agribusiness, which encourages the removal of forests and the planting of thousands of acres of for the planting of one crop, is largely responsible. Monocarp farming requires the use of powerful pesticides, which in turn eradicate harmless as well as harmful insect life. Only a shift to organic farming, and a massive switch to solar, wind, and other alternative sources of energy, could arrest this process. However, the fossil-fuel economy and the goal of capital accumulation stand in the way.

This brings us to take a closer look at climate change and the impacts of global warming. The US government's 2018 report on this subject, produced by The National Oceanic and Atmospheric Administration, confirms that global warming is a result of human activities, and that its consequences pose a serious threat to human health and well-being. Impacts of global warming singled out in the report include more frequent toxic algae blooms, disappearing beaches, heat waves, the growing threat of a real estate crash in coastal regions, and overpopulation in non-coastal areas as populations move inland.

Given the present rate of global warming, future predictions are dire. Researchers at the University of Hawaii warn that without keeping the warming of the planet below two degrees Celsius above pre-industrial levels, major cities like New York and Sydney can be expected to

face up to five catastrophic weather events each year—including wildfires, hurricanes with unprecedented rainfall totals, storm surges, and droughts (*University of Hawai'i News*, 2018).

Although these impacts affect us all, poor families suffer the most, as they are apt to live in undesirable areas, in communities that bear the brunt of atmospheric pollution, contamination

of water, and other toxins. Consider the scandal that took place in Flint, Michigan, a town comprised of a majority of poor and minority residents, where the children suffered severe health problems after being forced to use water laced with dangerously high levels of lead (Gazette, 2018). Thousands of children in Flint are at risk of brain-development problems and long-term kidney failure. We could also note the example of environmental racism that exists in the region commonly referred to as “cancer alley.” Located in southern Louisiana, it is notorious for its heavy exposure to factory toxins inflicted upon the predominantly black (van Wormer and Best horn, 2018).

Globally, class and race come into play as well. In poor countries, the death toll related to pollution is considerable. In 2016, according to WHO (2018), over six million people died from air pollution, especially in poor countries. In the future, starvation is also expected to be a major problem as rising temperatures and variable precipitation are likely to increase, and affect the production of staple foods (WHO, 2018). Even now, the prevalence of malnutrition and under nutrition is responsible for 3.1 million deaths every year. Over the next 15 to 30 years, climate change is expected to cause approximately 250,000 additional deaths annually from malnutrition, malaria, diarrhea, and heat stress.

According to the State of Global Health Report (Health Effects Institute, 2018), both India and China lead the world for deaths related to pollution and climate change, with over one and a half million per year. Fortunately, both countries are initiating drastic policies directed at curbing air and water pollution.

Against the backdrop of our human-induced ecological crisis, a sustainability ethos has emerged. Governments are coming together through the United Nations and signers of the Paris

Agreement to make commitments to reduce carbon emissions, and to invest in environmental-friendly forms of energy. At the same time, non-governmental organizations, such as the Sierra Club, the World Wildlife Fund, and The Nature Conservancy, actively work toward the cause of environmental sustainability. The recommended interventions by all these groups include the reintroduction of abundant growth to billions of acres of land which have been severely degraded or turned into desert as a result of human mismanagement. The signs that the world is waking up to the power of nature, and tapping into natural resources for solutions, is encouraging. The success of such global commitments will determine the shape of the physical environment that we impart to future generations, the forms human and non-human life will take, and ultimately, whether there is life at all.

Hearing the Earth Speak: Steps toward Restoration

As the Earth is victimized by exploitation and other forms of maltreatment, the sounds of nature are replaced by harsh noises (Canada& Furman, 2010). When we consider the exposure of the land to pesticides and herbicides that deplete the soil of nutrients and destroy the top soil through tilling and runoff, we are talking about “land abuse,” a term first used by Wendell Berry (1993). Forms of land abuse described by Berry include the clear cutting of logs, strip mines,

overflowed or overgrazed fields, and topsoil erosion—each of these activities poses a threat to the Earth’s ecosystem.

The wisdom that we can acquire from our biological world is badly needed in the making of public policy (Bateson, 1972). Although we cannot undo all or even most of the human-made damage that has been done in the modern industrial age, we can still work to replenish our natural resources, and restore the freshness of the air. If we agree with Fred Best horn (2013) that the natural environment is a victim of abuse and oppression in the same way that human beings are subject to oppression, then we can work toward restoration. Just as human victims need to have their voices heard and receive some form of justice, so too does the natural environment, suggests Best horn.

Restorative justice pays close attention to the anguished voice of the victim. To the extent that we accept the notion of land abuse in the tradition of restorative justice, then reparation or restoration is in order. Fortunately, an environmental restoration movement has emerged to address this situation. Restorative justice helps inform the environmental restoration movement by drawing attention to hearing the voices of the nonhuman world.

Best horn (2013) draws on phenomenological literature to make the case that the Earth, as well as its inhabitants speak, and that the Earth and its nonhuman inhabitants, by their very presence, and the magnitude of their influence, speak to us. The problem is not whether they communicate, but rather our difficulty in listening. Phenomenologists affirm that modern culture has lost much of its ability to listen to the natural world. How might environmental restoration look, Best horn asks, if it were to seek out and listen to the Earth’s voice? For an answer, he suggests that we work to discover the vocative character of the speaking Earth (nature’s way of calling to us), and in so doing find ways to honor nature and preserve it. “When harm does occur,

restorative efforts can seek out and consider the earth's [sic] voice rather than responding with purely anthropocentric evocations," he writes (p. 237). He continues:

Ancient Semitic tribes spoke of the mountains and hills as breaking forth into song.

These were not mere figures of speech. For ancients, boringness is, in essence, singing, chirping, creaking, warbling, and whooshing. All these are sounds heard in the natural world. (p. 238)

Restorative justice aims to accomplish reconciliation and understanding among victim, offender, and community following an act of wrongdoing. The goal is to repair the damage insofar as this is possible. Applied to environmental restoration, the victims may be thought of as the people whose health has been damaged by the polluted air, soil, or water or it may be the Earth itself. What is required is accountability for the offender (for example, a polluting chemical company), action by the community, and reparations for the victim. An environmental policy agenda must be developed to restore life, and replenish what was lost.

Environmental restoration, as Best horn suggests, must therefore consider ways to hear the voice of the Earth's nonhuman inhabitants if it is to become more than a wholly anthropocentric approach to problems of environmental degradation. This might involve, as Hoff and McNutt (2009) indicate, nothing less than a complete rethinking of our relationship with the natural world.

A starting point would be to shift the climate narrative from one focused almost exclusively on constructing flood-resistant housing or concrete sea walls to one centered on nature-based restoration. Whether restoring forests or farming in ways that are ecologically sound, or replenishing the coral reefs, one will find that nature is resilient. This is the argument of Adam Sacks, executive director of Biodiversity for a Livable Climate. Interviewed by Jamaal

(2018), Sacks faults the hyper-technologies used today and the covering of the Earth with concrete for the ecosystem dysfunction that is evident today. First, Sacks recommends removing pavement as much as is possible and replacing the surfaces with grass, trees, and plants.

Additionally, Sacks points to forest regeneration efforts, restoring wetlands and coral reefs. The WHO (2018) recommends policies and individual choices that reduce greenhouse gas emissions, as, for example, developing cleaner energy systems, and promoting the safe use of public transportation and active movement, such as cycling or walking as alternatives to using private vehicles. Together, these practices could reduce carbon emissions, and cut the burden of household air pollution that causes some 4.3 million deaths per year. If such corrective strategies are carefully applied, nature, which has an extraordinary power to regenerate, will show us the way to healing the planet.

Deep Listening to the Earth

An important aspect of nature is the religious or spiritual quality that many see in it. Historically, indigenous peoples have enjoyed reciprocal relationships with Mother Earth that permeates every aspect of life. This sense of oneness with nature gives First Nations Peoples a worldview distinct from that of modern Europeans. The legacy of a link between nature and spirituality is found in Native healing ceremonies, and the concept of the Medicine Wheel. Increasingly, formal religious bodies are acknowledging a divine gift in the bounty of the Earth.

To Norwegians, nature offers a major source of inspiration. When I lived in Norway, I discovered that Norwegians have an appreciation for their natural environment that goes beyond anything I had ever experienced before. In my work at an alcoholism

treatment center, clients were often reluctant to accept the serenity prayer, as many did not believe in God. We discussed the Higher Power, however, and the clients were satisfied to see a Higher Power in nature. Much like indigenous groups around the world, many Norwegians share a wide-ranging belief that the land is a sacred place.

In contrast to Americans, who are often at war with nature, Norwegians embrace it. Take the example of how we try to get rid of snow. In the Norwegian town where I lived, the snow was embraced. To my surprise, no one shoveled their sidewalks after weeks of heavy snowfalls. When the sidewalks iced over, I saw Norwegians, young and old, go around on sparks, a scooter-like contraption with blades to slide along on the ice. I got one on loan, and carried groceries on the front; the spark also served as a walker for elderly people to keep them from falling on the ice. In the countryside, Norwegians get around on cross-country skis; children learn to ski shortly after they learn to walk.

All Norwegian buildings, including factories, have unshaved windows so that all residents can enjoy scenic views. This is true even in the prisons. In all this, two cultural norms stand out: one is the right of open access to both public and private lands. The other is the expectation that all citizens should participate in outdoor recreation due to its healing and spiritual powers. Since Norwegians “dwell in beauty,” as Wordsworth might have said, and treat their landscape with reverence, we can easily conclude they listen to the Earth, and learn from its treasures.

Deep Ecology, a small but growing international movement that originated in the teachings of the Norwegian philosopher Arne Naess, echoes this theme (see also Capra, 1967). As eloquently described by Best horn (2002):

Deep-Ecological spirituality recognizes that humans share a common destiny with the earth [sic]. It celebrates an ongoing cultivation of a deeper identification of self with the

whole of the cosmic order. From this vantage point self-interest becomes identical with the interest of the whole. Humanity and nature cannot be separated—the sacred is in and of both. (p. 4)

This concept of nature as sacred pervades other cultural traditions as well. A celebration with a close connection to the bounty of the Earth and the harvest is the African-American Kwanzaa. Such ceremonies and rituals as are represented in the Kwanzaa holiday play an important role in providing meaning and purpose in life, bringing the generations together, and enhancing a collective sense of peace and harmony, as well as connections to the sacred (Canada & Furman, 2010). Kwanzaa is a Swahili word that means “first fruits.” From December 26 to January 1, the African-American celebration of Kwanzaa occurs. It is based on African traditions of when ancestors gathered together to celebrate the harvesting of the first crops.

The North American Native sense of oneness with nature, meanwhile, is a belief system that transcends all tribes. In recent years, as pipelines have been constructed across the US and Canada, mass protests have taken place. The protesters’ stated mission is to protect the sacredness of Mother Earth. A recent news report describes the elation of Native tribes at a recent ruling by a federal judge to temporarily halt the 1,200-mile long Keystone XL project to transport hundreds of thousands of barrels of oil from Canada to Nebraska. According to a reporter named Johnson (2018):

“This is a win for Lakota, the Coati Skewing and other Tribal Nations, for the water, and for the sacredness of Mother Earth,” Tom Gold tooth, executive director for the

Indigenous Environmental Network, said in a statement, “This pipeline is the enemy of the people and life as we know it. It must be stopped. We will continue our prayers to take action to fight the Trump administration in defense of the sacred, to protect Indigenous rights, to defend our treaty territories, and to advocate for the continuation of the next seven generations of life on Mother Earth free from fossil fuels.” (8th paragraph)

Darryl "Grey Eagle" Brown of the Choctaw tribe in Oklahoma is also greatly concerned about the impact of climate change, which has thrown the Earth out of balance, with heat waves, drought, storms, and fires. “The earth [sic] is speaking,” he says, “but man won’t listen” (One Million Women website, 2016).

Working toward Environmental Restoration

Hoff and McNutt (2009) urge that social policy making requires a new paradigm to guide progress toward building a caring sustainable social development. Such a policy involves restoration and preservation of the natural environment. Such a restoration would be directed toward the biological habitat, which would have a positive impact on both human and nonhuman life. For humans, the health of their physical surroundings has a strong impact on psychological health, as well as on social and community health. The interconnectedness between nature and spirituality is strong as well.

This paper argues that the first requirement of environmental restoration is listening to the Earth and heeding its call. How do you learn to listen to the Earth? What is the starting point? You can begin by reading some of the nature poems from the Romantic era; you can also study paintings from the same period. Then, turning to science, read the facts about what is happening

to the planet. Better yet, take a trip to Norway and see how the people there preserve and protect their natural surroundings. Talk to members of a Native tribe to grasp their appreciation for

Mother Earth. Above all, go directly to nature and listen. Finally, do as the Bible says:
“Speak to the earth [sic], and it will teach thee” (Job 12:8).

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