Grassroots Solutions for Global Problems





On the anniversary of the founding of the United Nations, we honor Minnesota citizens who have been "builders of a better world!"

"We need grassroots solutions in both our physical environment and our civic organizations to address some of our most pressing global challenges."

By James W. Nelson

- As we face global challenges, we reflect on our heritage of grass roots civic engagement and values. We remember resilient leaders that have led the search for solutions to global problems emphasizing shared interests and sacrifice.
- ❖ We thoughtfully examine the United Nation's worldwide **Sustainable Development Goals** to make the world more free, healthy and resilient.
- We discuss how the world-wide goals relate directly to the environmental capacity of our own region as well as the overall world's natural environment.
- We focus on the **beneficial role of pollinators** as key allies in the fulfillment of many global goals from increased nutritious food to climate stability.
- We promote "natural solutions" (e.g. Nature4Climate) for climate balance as well as to promote biodiversity through *increasing the quantity and diversity of pollinators* sometimes referred as the Guardians of Sustainable Development.
- We <u>act</u> in many capacities as environmental stewards to enhance pollinator habitat as part of a "Grassroots Solutions for Global Problems."

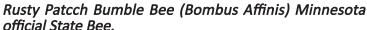




Our Bees are Guardians for Sustainable Development

"Making connections between nature and social systems and efforts to meet basic human needs in Minnesota and around the globe"

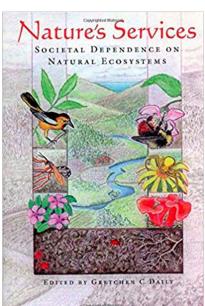




Famed Ecologist E.O. Wilson referred to invertebrates like pollinators as "the little things that run the world." Many people look to the United Nations as a global forum to address the diverse and sometimes conflicting needs of people throughout the world. Our world is increasingly interdependent on many levels. It may be useful to examine more closely the complex yet intimate relationships between the natural world and humankind's social world. The seminal concept of sustainability implies that we balance the needs of the natural and social/economic worlds while simultaneously balancing the needs between the current and future generations.

Nature's (ecosystem) Services are the processes through which nature's conditions and processes provide life support for the Human Family around the globe. Nature's Services are many and varied. These services include: purification of air and water, decomposition of waste, renewal of soil fertility, control of pests, pollination of food crops and natural vegetation, to name a few. These services are generated by complex cycles that can be traced ultimately to solar energy. The value of these life support systems have been illuminated most often by their disruption and loss. Societies are intrinsically connected and ultimately depend on their natural ecosystems. Nurturing our pollinators insures the health and resilience of our world.





Essays on Societal Dependence on Natural Ecosystems (Jan 1997)

The world's needs have recently been categorized by the **United Nations** into a constellation of complimentary Sustainable Development Goals (Sep 2015) dealing with hunger, clean water with mitigation of floods and droughts, human health and climate stability, etc. It is important to note the goals are universal and apply equally to Minnesota and Madagascar. Do pollinators have a role in fundamental these

human needs and even the vexing problem of climate change? The natural world contin-

ually provides essential services that make human existence possible. Pollination is one key environmental service. It is often considered to be one of the weakest links in our understanding about interdependence through which human and natural worlds depend.

Pollinators enhance mankind's abilities to produce enormous amount of nutritious food that, in turn, supports health, learning activities and many livelihoods. Pollinators also play a key role in promoting the regeneration and resilience of wetlands, forests and grasslands that absorb excess human generated carbon. This is a natural buffer for variable weather and even climate extremes. Recently a broad coalition of civil society groups titled Nature4Climate formed to focus the underutilized potential of natural solutions to address looming climate concerns. Due to the central role of pollinators as Guardians of Sustainable Development, they will play an essential role.

Pollinators, especially bees, are ideal models to exemplify synergies within nature and at the nexus of our nature's systems and social systems. The challenges

faced by pollinators illustrate one compelling challenge for overall sustainability. Pollination, as we learned in elementary biology, is the act of transferring pollen grains from the male anther of a flower to the female stigma. A goal of every living organism, including plants, is to create offspring for the next generation. **Pollination** is a process of transferring of pollens from one flower to another. Cross pollination among different plants promotes greatly increased yield and genetic vigor. **Fertilization** is the process after the successful transfer of pollen, which involves the fusion of male gametes and female gametes of the flowering plants.

Both of these are continuous, complimentary natural pro-



Bombus auricomus visits penstemon. Nelson Family Farm (June 2016).

cesses that are taking place the around globe. Pollinators, for example bees, are sustained by flowering plants and, conversely, flowering plants are mutually dependent on pollinators to transfer pollen for the vitality and continuation of their own species.

NO POVERTY **GOOD HEALTH** QUALITY AND WELL-BEING **EDUCATION** EQUALITY **CLEAN WATER** 9 INDUSTRY, INNUVATION AND INFRASTRUCTURE AND SANITATION CLEAN ENERGY **ECONOMIC GROWTH** RESPONSIBLE CONSUMPTION AND COMMUNITIES THE GLOBAL GOALS AND PRODUCTION For Sustainable Development 14 LIFE BELOW WATER 15 LIFE ON LAND PEACE AND JUSTICE 6 PEACE AND JUSTICE STRONG INSTITUTIONS



There is a striking "sense of mutual **cooperation"** within species and between complimentary species such as flowering plants and bees. There is even a similar cooperation between the natural world when people act as environmental stewards to the natural world we share.

Outside of agricultural systems, up to 80% of the flowering plant species found in natural habitats require insect-mediated pollination. Plants are the foundation of global food chains. The foliage and/or fruits and nuts that plants make are consumed by humans, or animals in the human food chain, or animal predators. Furthermore, plants provide shelter and nesting habitat for an enormous number of different living species.

Pollinators are a force multiplier when present in sufficient quantity. They can greatly magnify the amount and the quality of the food or seed produced. Likewise the absence of pollinators can cause an outsized reduction in the nutritional quality or productivity of plants. Overall a robust quantity and diversity of pollinators is needed in order to promote the regeneration and diversity of our natural ecosystems. We need healthy pollinator populations to ensure that future generations of plants will be reproduced and genetic vigor maintained. Loss of bees and other pollinators is linked to global hunger and many related health issues. Lack of nourishing food severely impacts other sustainability goals such as livelihoods and learning. Conservation can be thought of as an investment in public health.



Lynndale Peace Garden, Minneapolis (Jun 2019).

"Sustainability and Sustainable Development" are seminal concepts that have gained prominence dating back to the United Nations Conference on Human Development held in Stockholm (June 1972). At the time the United Nations organization was only beginning to think about environmental security and emerging environmental threats as issues to be considered under the United Nations Charter. Retired UN Under Secretary Robert Muller reminisced at a Saint Paul gathering (April, 1993) that there was profound scorn when he proposed the first UN conference dealing with environmental matters. The sarcastic refrain was "the bird watchers were taking over the United Nations."



Assistant UN Secretary Robert Muller (ret) Hamline University, St Paul, MN with James Nelson (April 1993).

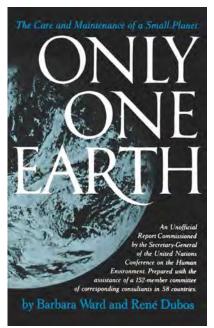
Although Muller's Minnesota visit highlighted environmental challenges spanning the globe he had many compliments for Minnesota's historic response to difficult environmental problems. Examples he cited included the millions of trees planted by the Civilian Conservation Corps during the Great Depression era. He also reflected on the Minnesotans who worked in hundreds of "victory gardens" around the state during the World War 2 era.

This was a simple, meaningful response to food shortages during that era. Muller's remark highlighted the development of the concept of sustainability under the leadership of the United Nations. A simple yet meaningful suggestion for the future from Muller was that schools and churches have a "peacemaker garden" to remind us of our profound dependence on the earth.



Dowling Community Garden (a World War 2 Victory Garden) in Minneapolis MN (Jul 2018).

The first United Nations Conference on the Environment had common roots in Minnesota. In October 1972 the Minnesota Women's United Nations Rally hosted famed British economist Barbara Ward Jackson. She had recently completed the highly influential book with co-author political scientist Rene Dubos Only One Earth (Apr 1972). The work was commissioned by United Nations Secretary General to provide factual background and a con-



The Care and Maintenance of a Small Planet (May, 1972).

ceptual framework for the international conference taking place in Stockholm. This brilliant synthesis contained the insights of social scientists, economist's and even humanists to tackle the perceived "limits growth," the challenge of economic development and emerging environmental problems. Some of the earliest expressions of the concepts of sustainability and sustainable development came from the ideas of over 150 people from 58 countries.

In many ways these early investigation became the foundation for later policies that attempt to discern development risks as well as promising approaches to a more harmonious balance between the natural and man-made environments. This Minneapolis meeting was a notable community organizing success. The UN Rally was a network of 40 community groups originally organized by community leader Fanny Brin to assure that our country adopted the UN Charter following World War II. Leaders, especially women, carried on her grass roots organizing work to following generations. In the company of over 900 attendees, discussion leaders help chart new direction for the United Nations that emphasized not only conflict resolution but systematic efforts to promote global solidarity for the care and maintenance of the small planet we all share.



Barbara Ward Jackson.



United Nations Conference on Environment & Development Conférence des Nations Unies sur l'Environnement et le Développement

160 Route de Florissant P.O. Box: 80 CH-1231 Conches Switzerland

lr. James W. Nelson irector UN Association of Minnesota 4820 14th Avenue South Minneapotis, MN 55417 USA

I wish to congratulate the UN Association of Minnesota in its effort to support the work of the United Nations Conference on Environment and Development (UNCED). The UNCED on "Earth Summit" will be one of the most important events on the global agenda of 1992. It is an opportunity for nations of the world to flood a common basis for action in order to protect the future of our planet.

It would also be an opportunity for individuals and communities to take up the challenge of environmental protection and encourage sustainable development. Non-Governmental Organizations (NGOs) such as the UN Association of Minnesoda have an important rote to play in the UNECE process.

First, NGOs can influence governments to attach greater priority to the conservation of the environment. The NGOs have a wide network in all sectors of society and can play an influential role.

Second, NGOs can educate individuals and communities on issues of environment and development through the activities and programs on a regular basis.

Third, NGOs can advise governments on a wide range of environmental concerns as many NGOs are specialists in their own right.

The efforts undertaken by your organization are a step in the right direction. I am impressed by the large scale of activities planned for your community by the UN Association of Minnesota. It is myope that other similar organizations will be encouraged to follow your example by playing an active role in the UNCED process.

Ambassador Tommy Koh Chairman Preparatory Committee to UNCED



Youthful UN Ambassador Tom Koh of Singapore foreshadowed the merging of the economic, social and environmental global issues in his address to the United Nations Association of MN Annual Meeting (May 1982). He came to Minnesota at the invitation of organization founder York Langton. He maintained friendships with several Minnesotans in the years before he organized the first United Nations Conference on Environment and Development, popularly known as the Earth Summit, on behalf of the United Nations (Rio Brazil, June 1992). This was the first global scale conference to reconcile the natural environmental world with the demand of the economic world. It examined the possibility of "climate change" and the alarming loss of biodiversity.



Singapor UN Ambassador Tommy Koh (Apr 1992), chairman of the Main Committee of the UN Conference on Environment and Development, where he presided over the negotiations on Agenda 21.

York Langton was the founder of the present day citizens group, the United Nations Association of MN. He was a close friend of Eleanor Roosevelt and many early United Nation leaders. He grew up in rural North Dakota. In his professional business career, he nurtured the establishment of a chain of hardware stores throughout the rural Upper Midwest. His life experiences taught him about the connections between rural agriculture economies and the human societies they support. He envisioned the United Nations organization to first reduce devastating conflicts, but more positively to promote cooperation and healthy human development. He championed a healthy environment as a necessary precondition for sustainable development.



Congressman Donald Fraser (an ardent UN supporter) presents York Langton a lifetime achievement award (1982).

Progress accelerated during and after this UN Conference on Environment and Development, more commonly known as the Earth Summit, held in Rio de Janeiro in 1992. Prior to meeting in Rio there were several preparatory briefings. Locally these were sponsored by organizations that, together, comprised the Minnesota United Nations Movement. Perhaps the most notable meetings were held in Minnesota on the weekend of February 22-24, 1992. These gatherings centered on the visit of Ambassador Robert Ryan, Jr., official leader of the United States delegation to the conference, and Frances Spivy-Weber, vice president of the National Audubon Society. Although the meetings focused on the broader concepts of sustainability it was one of the earliest forums on the challenge and possible consequences of global climate change.



Minneapolis Star Tribune February 15, 1992.

They spoke at a forum of young people on the need to build a durable future using "sustainable principles." The address foreshadows efforts 25 years later for the United Nations to establish sustainability goals. Since many of the principles dealt with nature and the future of youth, this inaugural meeting took place in Saint Paul at an institute dealing with wildlife conservation. There was a field trip during that weekend which included a tour of the restored prairie on the Nelson Family Farm and a visit to the National Eagle center. On Saturday there was a public forum with business leaders, indigenous representative, agricultural interests and many more. It was the first large scale community discussion on sustainability and one of the earliest public forums on the topic of adverse climate change and the likely consequences.



Ambassador Robert J Ryan. Jr with Frances Spivy-Weber, U of MN Raptor Center, St Paul, MN (Feb 1992).



Sustainable Development: Working Together for Our Common Future

The phrase above is a seminal idea whose time has surely come, but what does it really mean?

Containly it connotes linkages: linkages between distant parts of an interdependent world; linkages butween different disciplines such as science, culture, ethics or commerce; but most of all linkages in the temporal brider between generations of people.

The World Commission on Environment and Development, chaired by Norway's Gro Harlem Brundtland, in its report 'Our Common Future', defined "sustainable development" as, "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

It is the work of the United Nations Conference on Environment and Development, (UNCED) a series of U.N. sponsored working groups and conferences that will attempt to develop a common vision for linking environmental and economic development decisions.

These negotiations will formulate plans and fix objectives against which progress can be measured. Specifically it will produce agreements on the following:

- An Earth Charter of basic principles of environmental rights and responsibilities for all of
 us
- Agenda 21, a detailed plan and timetable of specific actions that need to be taken especially the remaining years of this decade.
- New ways to strengthen the institutional capacities of the U.N. and enhance the effectiveness of the marketplace.
- New international conventions on climate change and blodiversity, i.e., conserving the variety of life forms, the genetic diversity they contain, and the ecological roles they perform.

To be successful, this process must also address the technological, financial and institutional means of implementing those plans. The capstone of this consensus building will be the Earth Summit, which will take place in Rio de Janiero, Brazil from June 1-12, 1992.

While the notion of "sustainable development" offers one central theme, which is intergenerational equity, it also provokes a call for a vigorous discussion about what the diverse dimensions are of our future on this planet. The following are recurring themes in that



Our birds: Toucan and Loon is a graphical metaphor linking Minnesotans with the Earth Summit to be held in Brazil in June, 1992

Minnesota civic leaders Stan and Martha Platt organized a national convocation in Washington D.C. during the same month (Feb 1992) to craft global institutions to promote cooperation in the increasingly interdependent world where environmental concerns were coming into sharper focus. Stan was a well respected business investment leader and Martha was trained social worker as well as a civic leader. Together they were the foundation of many Minnesota organizations that engaged citizens to participate locally in cultural understanding and world peace. Together they were charter members of the Citizens League, Global Minnesota, Citizens for Global Solutions and the establishment of the Word Affairs Center at the University of Minnesota.

The Platt family believed that it was not enough to have imaginative ideas but it was necessary to organize activities and nurture future leaders to bring ideas to fruition. Although they never sought the limelight, the efforts have won admiration for their examples of engagement. While they were both in their 80s, they went on to organize two national conferences on different aspects of sustainability. They were clearly trying to help a future generation. Over long and productive careers they provided illuminating models of service above self and working together toward shared goals.

The Rio Declaration (June 1992) recognized the right and obligation of governments to foster economic and social development and highlighted consistent principles such as maintaining ecological processes, observing the rights of indigenous people, preserving biodiversity and implementing a framework convention on climate change.

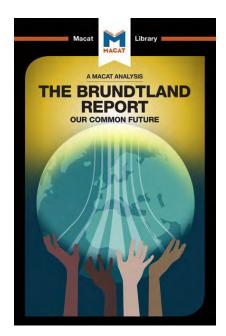


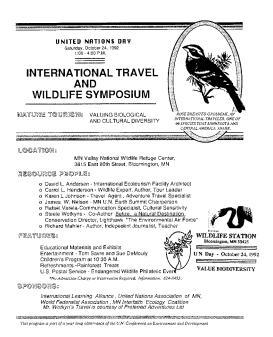
Martha and Stan Platt (from Platt family).

This declaration highlighted principles of sustainable development including well-known concepts such as intergenerational equity and the precautionary principle. Here equity refers to making prudent decisions that impact the ability of future generations to thrive. The precautionary principle implies a social responsibility to protect the public from exposure to harm when scientific investigation has found a plausible risk of serious consequence for society. As the concept of sustainability took root, there was a worldwide response to focus these principles into the functional **Sustainable Development Goals (June 2015)**.

Sustainability concerns began slowly to gather momentum following the UN commissioned **Brundtland Report:** "Our Common Future" (May 1987) which clearly highlighted an array of daunting environmental challenges. This report propelled interest in global sustainability and

emerging future challenges. The topics of nature and achieving balance with natural systems were always included in conversations about sustainability. For example the Minnesota United Nations Day (Oct 1992) celebration focused on nature as a living system and was held at the Minnesota Valley Wildlife Refuge.





The concept of sustainability gradually developed as part of the United Nations movement and the leadership was often ordinary citizens outside of government. While the United Nations appears to be an imposing institution primarily for diplomats and government bureaucrats, the goals of this institution are meant to engage individual citizens in a variety of capacities. The very fact that we have a United Nations can be credited to the energetic work of a diverse corps of dedicated citizens that worked throughout the World War 2 era. The initial goal was to rally strong popular support that would assure our country would become a charter member and actively in the interdependent world.

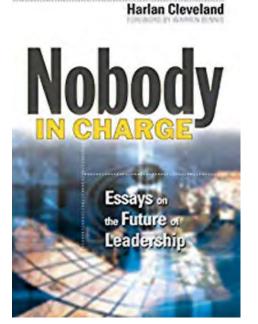
Whose job isit to fulfill these goals? The founding Dean of the University of Minnesota Humphrey Institute of Public Affairs, and staunch UN Supporter, argued in an essay, "The Future of the Past," that in a modern world where nobody is full in charge, then all of us are partly in charge for making the choices and taking the chances. Crucial learning skills include integrative thought, a habit of discerning activities and the art of "getting it all together" will be paramount skill in the emerging world.

UN Day Oct 24, 1992 Bloomington, MN, Minnesota Valley Wildlife Refuge.

Do we prove that we live in an interdependent world? If we look at our own lives we discover that many every day products and services that we use are

sourced from faraway lands. Likewise many jobs and livelihoods of Minnesotans, from farmers to high technology firms, are dependent on finding markets across the globes. These are some compelling reasons for Minnesota based organization to respond to the framework and standards established by the United Nations. Saint Paul based Ecolab's 2018 **Sustainability Report** is a clear evidence of this reality.





Harlan Cleveland. Editor (May 2002).

Cleveland's compelling books and essays are based upon a long fruitful career of service in government, civil society and learning organizations. He was careful to draw on useful lessons from the past but carefully assessing how the 21st Century may have important differences. He has championed the phrases "nobody in charge system" and uncentralized social systems where larger numbers of people make imaginative initiatives and sustained efforts. Our modern information world encourages people to work together on shared goals that capitalize on individual curiosity, ingenuity and human spirit. Cleveland frequently used the term "coalitions of the willing" to describe the less formal, grassroots approaches to working for meaningful change in the world. A newer pattern of consensus building around agreed standards and cooperation among people who are continuous learners may be the most reliable path to address global scale challenges.

Are we truly world citizens? Early American patriot Thomas Paine, the author of *Common Sense*, the enormously effective pamphlet that justified American

independence from Great Britain, was famously quoted: "The world is my country, all

mankind are my brethren, and to do good is my religion. The only thing necessary for the triumph of evil is for good men to do nothing." In Minnesota, former Governor and respected business leader Elmer L. Anderson, declared in a World Law Day speech on May 1, 1968, "I am proud to live where public authorities are courageously speaking out on behalf of an equal concern for all men, everywhere and in support of the concept of World Citizenship in a world community of nations."

Simply declaring one's identity as a world citizen is fairly simple; acting as world citizens with concern for the entire planet has proved to be very challenging. Elmer and his



Law Day May 1, 1968 Minneapolis, MN.

wife Eleanor had a passionate interest in nutrition and food security. They were, in fact, owners and managers of a large thriving farm in addition to their corporate business. They collected some of the finest texts on agriculture horticulture and related knowledge from around the world into a comprehensive special library. The Andersen Horticultural library was opened (June, 1974) at the Minnesota Landscape Arboretum.

World Citizenship is a nebulous notion that could define on several levels — cultural, economic and political. The cultural metaphor is obvious. Every year the International Institute of Minnesota sponsors the Festival of Nations to celebrate the diversity of Minnesota's ethnic roots. Economically Minnesotans enjoy the benefits of imported products from around the world and the contributions of people who have settled here. Minnesota businesses and workers are grateful that livelihoods depend on exports of Minnesota products and services around the globe. Global needs and problems can be satisfied with product and services from talented Minnesotans. For some Minnesotans the concept of World Citizenship had a special meaning. They were seeking a more just and healthy world where "the force of law supplanted the law of force." War has resulted in immense suffering throughout history. It is an immense challenge to reduce conflict and prevent future wars.



Festival of Nations, St Paul MN (May 2019).

One family was not daunted by the magnitude of the challenge. Lynn Elling was a young naval officer who served in the South Pacific during the Second World War. He saw the devastation first hand including the ruins at Hiroshima. Lynn and his wife Donna were active in planning the UN flag raising in Minneapolis in 1968. As time continued they sought to make the "world citizen concept" more widely known and actively incorporated in Minnesota life. There were many solid achievements in a life of imaginative effort.



Lynn and Donna Elling (May 2002).

Among their achievements they convinced **Governor Wendell Anderson** to declare a state-wide **Declaration of World Citizenship (May 1971)** that was widely endorsed by many political and religious leaders. With much assistance from other UN supporters, they produced three films. One film, *Man's Next Greatest Leap*, used the space program theme to describe the awesome challenge of eliminating war for settling conflicts. Today we have a similar enormous challenge of combating climate change.

While continuing their dedicated work on the annual Law Day observances, the Ellings founded the educational organization "World Citizen" to implement the Peace Site concept. This idea was to dedicate schools and churches as Peace Sites. In 1988, the first Minnesota Peace Site, Longfellow Elementary School in Minneapolis, was dedicated. Since the first dedication hundreds of sites have been dedicated in Minnesota and around the world. These dedications and periodic renewals have been amazing celebrations of communities coming together. At each site participants developed their own commitment to peace and conflict resolution. Plaques were hung, gardens were planted, and peace poles were placed. The Elling family's dream of a healthy world without war became more visible through the Peace Sites.



Governor Wendell Anderson (Wikipedia).

Governor Elmer Anderson's vision was not merely technical skills to produce more. He viewed himself as a world citizen trying to build a better local and global community. After Elmer Andersen's Law Day speech, Wendell Anderson proclaimed a more comprehensive **Declaration of Interdependence (May 1971)** linking our state's goals with the goals of the rest of the world.

That tradition continues in more recent times. That is why it was very hearting to join Minnesota Governor Mark Dayton who gathered leaders of 60 major Minnesota corporations at a meeting (June 2018) specifically focused on addressing global climate change. The meeting confirmed that Minnesota will join 23 states as part of United States Climate Alliance and abide by 196 national



governments who formed an Accord in Paris 2015. The current US administration has announced the intention to withdraw from the Accord. In Minnesota we are making history.



Photo Credits: Climate Generation (June 2015).

Looking more closely at the goals of these companies and others organizations in our state one would discover that many have made ambitious commitments that closely track the UN's Sustainable Development Goals on many issues in addition to climate. Many companies are now embracing a global view of citizenship and including "Sustainability Reports" as part of their Annual Report to stakeholders. Minnesota based Ecolab describes corporate response to the challenge of worldwide Sustainable Development Goals.

The paramount goal of Sustainability is partitioned to permit focus into 17 individual goals. Unfortunately dividing the world into discrete areas may inhibit holistic thinking. These goals are a constellation of interrelated human needs and aspirations that complement one another. Pollinators, especially bees, are powerful catalysts toward the achievement of many of these sustainability goals. Insects, especially bees, are essential for one of three food products cultivated by farmers to earn their livelihood (goal 8) and feed a burgeoning world population (goals 1, 2 and 12). Nutritious fruits and vegetables especially serve as a precondition for everyone's health (goal 3) and clearly children's development and learning (goal 4).

The life enhancing work of bees also promotes landscape resilience through augmenting the pollination of native trees and plants (goal 15) whose deep roots filter contaminants to water (goal 6) and lessen the tendency for flooding. A healthy native ecosystem is needed for biodiversity (goals 14 and 15) and may serves and as a spiritual refuge for we often overstressed humans. (goal 3) Our regenerative world is a natural storehouse for excessive carbon in the atmosphere. This pollinator mediated natural world provides a buffer against adverse weather events and lessens the vagaries of climate fluctuations (goal 13).

Lack of nutritious fruits and vegetables often results in vitamin and mineral deficiencies. These problems cascade as nutrition deficits impact children, worker productivity and income. It often results in increased incidence of illness and developmental challenges for children. The root cause of this hidden hunger can often be traced back to lack of pollinators. There are obvious connections between sustainability goals. Some goals can be combined and pursued simultaneously. For example diversifying energy production with renewable energy ground mounted solar panels presents opportunities to establish millions of native plants around solar panels. It is a cooperative stewardship circle: providing native plants insures the quantity and diversity of pollinators that in turn provides essential services that insure overall health and resilience of our world.



UN Sustainable Development Goals (Jun 2015).

As we enter the year 2020 there are more reports of the stresses in our dynamic global environments. There is now more evidence about climates changes and adverse weather conditions. Many agriculture and other economic processes have contribute to the loss of bees and other pollinators. New studies chronicle decline in numbers and diversity of bees and other pollinators. This decline is directly linked to global hunger not only in crop yields but also the quality of food. Diet details matter.

Pollination is one of the most visible ecosystem services. Increasing the density and diversity of pollinators such as beneficial bees will augment progress (goal 9) on the path to global sustainability (goals 16 and 17). Both complex natural systems for example climate and human social systems like the market economy have stabilizing processes. However these stabilizing processes can fail or become dysfunctional. It is imperative that we organize and channel our energies into strong institutions that promote an equitable sustainability for all. (Goals 16 and 17)

Currently the challenge of climate change seems to be the Sustainable Development Goal receiving the most attention. Climate science has shown that over fairly recent periods of time that **average weather** has changed into new higher norms and with more extreme directions. Weather that used to happen very infrequently now happens quite often. Weather that we took for granted like winter snow cover is happening less reliably. Destructive weather patterns such as violent storms, droughts and wildfires now occur much more often. Record weather patterns are happening more frequently and they can't be explained with purely metrological concepts.

Nature is not an adversity but by its essence can be a complement to our lives as human. **Nature** can be one of our strongest allies in combating **climate change** while it is satisfying several other important goals. The initiative **Nature4Climate** is a powerful **new "coalition of the willing"** to bring voices from governments, civil society organizations, and business together, and to raise awareness for the potential of nature-based climate change solutions.

To address climate change, many leading scientists and business leaders believe that we must invest in "Natural Climate Solutions" alongside the energy transition and other technical strategies. Natural climate solutions are proven ways of storing and reducing carbon emissions in the world's forests, grasslands and wetlands. Better stewardship of the land also has a positive impact on other critical environmental, social and economic benefits. Nature4Climate (N4C), https://nature4climate.org, is an initiative of the United Nations Development Programme (UNDP), the United Nations Environmental Program (UNDP), the Convention on Biological Diversity (CBD), the



Chisago County, Solar Garden (July 2019).

International Union for Conservation of Nature (IUCN), Conservation International (CI), The Nature Conservancy (TNC), Wildlife Conservation Society (WCS), Woods Hole Research Center, World Business Council for Sustainable Development (WBCSD), World Resources Institute (WRI) and World Wildlife Fund (WWF) that aims to increase investment and action on nature-based solutions in support of the Paris Climate Accord.



Nature4Climate logo (June 2018).

The 2020s could be the decade of ecosystem restoration. Landscape restoration should be a primary set of tools that compliment many strategies such as decarbonizing the economic systems. The United Nations Inter Government Panel on Climate Change outlined the task with sobering clarity in its special report on the Paris Agreement's 2.0°C benchmark. The next decade is when we decide the future we get for ourselves and future generations. Responding to climate change is an enormous challenge that will require unprecedented cooperation: both grassroots mobilization of our civic organizations and grassroots solutions that rely on nature itself.

Nature has too often been neglected, or at best relegated, behind technology and engineering solutions. Carbon capture and storage or carbon trading are promising strategies but are unlikely to achieve one third of the greenhouse gas mitigation required between now and 2030. Natural climate solutions have that potential. It has been estimated that natural climate solutions — that is, restoring, re-establishing and protecting forests, peatlands, mangroves savannas and other landscapes — can provide one third of the cost-effective CO2 mitigation



A slide from early presentation advocating stewardship and "Natural Climate Solutions" (Dec 2009).

needed to 2030 for a good chance of holding warming to below 2°C. It has the potential to achieve these benefits at a small fraction of the cost.

The fight to stop human-induced global warming must include nature-based solutions alongside the decarbonization of our energy and economic systems. Consider the following:

- ◆ To date, Natural Climate solutions have only received a fraction of the funding allocated for climate mitigation globally and only a small share of political attention
- → If degraded forests were allowed to regrow, they could capture up to three billion tons of carbon annually for as much as 60 or more years, providing us with a bridge to a fossil fuel-free world.

♦ Boosting the total area of the world's forests and woody savannahs and grasslands could store around one-

quarter of the carbon necessary to limit global warming to 2.0 °C. Recall the example of the large scale landscape restoration by the Civilian Conservation Corps during the Great Depression era.

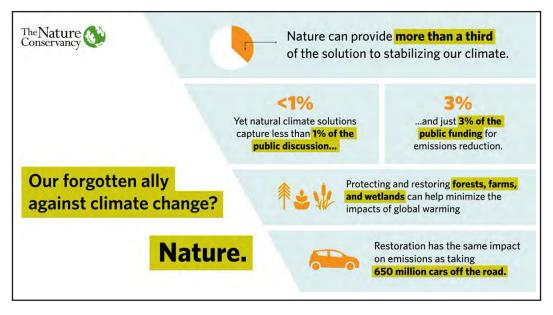
♦ The degradation of nature undermines progress towards 80% of the UN SDGs and thus the creation of several million new jobs by 2030 that depend on the world achieving those goals. Meanwhile, Natural Climate Solution complimentary Sustainable Development Goals 1, 2, 6, 8 and 13 will be in jeopardy.

In many ways we can partner with those invertebrates like pollinating insects that "run the world." We can deepen our knowledge about the natural environmental processes. We can learn more about how the concept of sustainability increases the vitality and resilience of many life processes. We can begin in our own gardens, and with our thoughtful purchases of food and other necessities. We can act as environmental stewards when considering public policies that promote sustainability. When we view the world through a sustainable lens, and understand that we live in a world with "nobody in charge," we can take charge and exercise the global dimension of our world citizenship.

In our own lives we can become "Builders of a Better World."



"Builders of a Better World Garden/ Learning Circle" — Peace Site, Lindstrom, MN. See nelsonfamilyfarm.org.





Nelson family farm (2014)

Researcher/Writer Profile: James "Jim" Nelson kdjnelson@gmail.com

Jim is a lifelong Minneapolis resident. He earned a degree in Economics from the University of Minnesota and a Certificate in International Management from Minnesota State University, Mankato. He worked in Project Management and Administration over 40 years in three Twin City industrial Aerospace companies: Sperry Univac, Control Data and Honeywell.

In parallel to his corporate career Jim enjoyed working in small scale farms and gardens for over five decades. In this avocation his interests focused on landscape restoration, especially native plants and insect pollinators. Jim is proud of his community involvement, especially environmental affairs.

He attended the first United Nations conference on the Environment in 1972. Years later he was recognized with the Honeywell Corporate Community Service Award in 1996 for community education about the United Nations. The United Nations Association of MN honored Jim with the Harold Stassen Award in 2016 for 50 years' service. The Johansen Foundation (Europe) presented a life time achievement award for Global Sustainability in 2017.

Citizens for Global Solutions, Minnesota was awarded a grant from the Minnesota Historical Society in 2018 to collect materials and prepare a preliminary report in conjunction with the 75th anniversary of the founding of the United Nations; Jim was Principal Researcher for this grant.

Jim has always been proud of the fact that he has been a "volunteer" not a paid staff member in a variety of civic organization. Like many colleagues he is actively exercising the global dimension of citizenship.