

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

Do you want to know what local environmental ecological and climate events (on-line and in person) have been scheduled for Grey, Bruce and environs?

They're listed and described at Grey Bruce Climate Action's event listing:
<https://greybruceclimateaction.ca/events>,
where you can also add your own organization's upcoming events.

VIDEOS OF SIX BEAVER VALLEY VISIONING SESSIONS ARE ON-LINE

In our last *Village Green* edition we mentioned that the Municipality of Grey Highlands had held six visioning sessions about the environmentally rich Beaver Valley Corridor. Video recordings of these visioning sessions are now on-line at <https://www.greyhighlands.ca/en/business-and-development/visioning-session-beaver-valley-corridor.aspx#>.

Part of the impetus for Beaver Valley visioning has been the impending possibility of a decision by Grey Highlands to engage with the private sector for use of lands in and adjacent to the privately owned Talisman property in the Valley. A group of local citizens has come together to develop a civic option for use of these properties, but since civic organizations were not invited to be part of initial discussions with the municipality about the use of these lands, the newly formed civic group needs time to put together an ecology-driven proposal for use of the lands. The group is circulating a petition worded this way:

"We ask that Council delay any sale of the 3 parcels in order to give the citizens leading this effort 3 months to bring together nature conservation, education, service organizations and other stakeholders to develop an appropriate and realistic plan for the properties. We need time."

The petition is on-line at <https://www.surveymonkey.com/r/DJP9KJT>.

"A GREENER GOODBYE": GREY HIGHLANDS MAY HOST NATURAL BURIAL SITE

Grey Highlands may become the fifth community in Ontario to host a natural burial cemetery, and the first to have it as a freestanding cemetery (i.e., not part of a larger conventional cemetery). Canada's only stand-alone natural burial site is in B.C.: it's not run by a cemetery chain, but by a couple who had farm property. In the U.K., many natural burial grounds are on farms. Natural burial sections of cemeteries already exist in Niagara Falls, Waterloo, Cobourg and Picton. Given rising interest in environmentally friendly burial, natural burial plans are being developed in thirteen Ontario communities, including West Grey and North Bruce Peninsula.

Says Susan Greer, Executive Director of Ontario's Natural Burial Association:

"Natural burial returns the body to the earth in a protected green space so the body can contribute to the earth's renewal. The body is buried in a biodegradable casket or shroud in a natural burial ground. While below ground the body is nourishing the earth that fed it through life, above ground, the land is restored to its natural eco-habitat. Our final act is giving back to the earth, as opposed to cremation which burns fossil fuels and puts carbon in the atmosphere. It's nothing new, just new to today's consumers. It's the way many of our ancestors were buried before deathcare became commercialized, and many cultures (e.g., Jewish and Muslim faiths) have always embraced this practice."

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

The proponent of the Grey Highland site, Sara Benjamin, developed an interest in natural burial in 2015 after seeing a film, *A Will for the Woods*, about the practice, but her interest lay dormant until Covid-19 brought death “out of the closet” for her (her own mother died in the pandemic).

A teacher by profession, Benjamin was raised on a farm near Stayner. She and her husband bought their 100 acre site on the eastern edge of Grey Highlands near the hamlet of Duncan in 2014 and built their “forever home” on it. The property is largely wooded, but Benjamin envisages a ten acre meadow on it as the site for the burial facility, connected to walking trails through their forest. Other than a clean-up of debris from earlier logging, the site would be left in its natural state. Building near the burial area would be limited – a washroom perhaps and a shelter for bad weather: simplicity is Benjamin’s byword.

Benjamin hasn’t chosen a name for the facility yet. She may ask the public to suggest names or she may name it after her late mother who supported Benjamin’s dream.

She admits that her passion for natural burial can raise a few eyebrows:

“We live in a culture where someone wanting to work in deathcare could be considered weird. That’s a sad reflection of how far we have strayed. Death is part of life. I see value in removing the stigma that’s evolved around death. As I have lived, loved and lost, my personal relationship with death has evolved. Death, while challenging, doesn’t make me as uncomfortable as it once did, and I think many others feel the way that I do. We give an extraordinary amount of attention to other major life events (birthdays, graduations, engagement parties, weddings, religious rites of passage, baby showers, anniversaries, and now gender reveal parties and even promposals) and then there is death. We have an opportunity to shift the way that we think about and experience this inescapable life event. When we invest in natural burial cemeteries, we have an opportunity to make our final act, a profoundly beautiful life-giving legacy.”

Benjamin sees the facility as a partnership with the community. She envisages building relationships with a carpenter to provide biodegradable caskets, a seamstress / seamster to make shrouds, a local flower shop to help infuse beauty into ceremony, and a neighbor with a backhoe to help with excavation. And while the facility would be a business, Benjamin says her reasons for wanting to create it are ethical, aesthetic and environmental:

“Creating beautiful, natural spaces for humans to be buried in, to visit, and to honour our dead is a step in the right direction. Preserving cemetery land into perpetuity means that natural burial cemeteries become land conservation spaces. Natural burials are better for the environment and they help combat climate change. I now see that our parting gift can be giving back to the earth that fed us through life.”

Under the Funeral, Burial and Cremation Services Act, the municipality can approve the cemetery if it believes it is in the public interest to do so. Grey Highlands Council will consider the Natural Burial Cemetery request at its June 16 Council Meeting. The municipality welcomes written comments on the natural burial proposal by June 4 – they can be sent to the Municipality of Grey Highlands at clerk@greyhighlands.ca.

Thanks to the tireless advocacy of local resident Bob Hope, Owen Sound already has a “sort of” natural burial section in Greenwood Cemetery. Hope and his fellow advocates persuaded the city to devote part of the cemetery to natural burials but the city stipulated that the area must be screened off from the rest of the cemetery by cedar hedges. Owen Sound has yet to allow the natural burial section to let natural plant growth to take it over. One burial has taken place in the section so far.

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

The Owen Sound experience highlights a problem when natural and conventional burial sites are part of the same cemetery. Conventional cemeteries are manicured, while natural cemeteries grow wild (merely a messy eyesore to those who prefer mown grass).

Ontario's Natural Burial Association website is at <https://naturalburialassociation.ca/>.

SOUTH BRUCE: A NUCLEAR DUMP SITE?

A long-standing nuclear controversy in Bruce County may heat up again before it is resolved.

In January, the Nuclear Waste Management Organization (NWMO) – a non-profit organization established in 2002 by Canada's nuclear electricity producers to plan for safe long-term storage of Canada's used nuclear fuel – conducted a mailed survey of South Bruce residents to gauge their attitudes toward a project to bury nuclear waste in a deep geological repository in South Bruce. The survey results will be available later this year. Said Ben Belfadhel, Vice-President of Site Selection at NWMO:

"Talking to people and hearing what they think their priorities and values, questions and concerns are is a fundamental part of implementing Canada's plan. Community surveys are one of the many ways we hear from residents. Our goal is to understand awareness of the project, and the topics people are interested in learning more about through community studies in 2021."

According to Natural Resources Canada, nuclear plants provide about 15% of Canada's electricity. There are 19 nuclear reactors running at six power plants, all but one located in Ontario. Nuclear energy doesn't produce significant greenhouse gas emissions but its radioactive waste can remain toxic for thousands of years. This waste is kept in a pool for up to a decade, then transferred to dry containers and buried deep underground. Since this system was introduced, there have been no reported leaks in Canada. But NWMO wants to create a new repository, and it has narrowed its choice to two alternative sites from an original list of 21 communities: the municipality of South Bruce (population 6,000) and the town of Ignace in northwestern Ontario. No decision is expected until 2023, but exploratory work is underway, with construction slated to begin in 2033.

South Bruce, bordering Lake Huron, lies two municipalities over from the Bruce Nuclear Power Plant, Canada's largest nuclear facility. In October 2020 NWMO announced it had secured 1,500 acres of land north of Teeswater as the potential storage site. NWMO is currently preparing to drill two test boreholes to further investigate the suitability of the site for nuclear waste storage.

In South Bruce there is both support for and opposition to the idea. Proponents of the South Bruce site say the project would bring thousands of jobs to the town. Opponents are concerned about even the remote possibility of a leak, especially given the proximity of Lake Huron, and the possibility that opening their land to Bruce Nuclear's waste might encourage other nuclear plants to try their luck in South Bruce as well.

Says the Municipality of South Bruce's website:

"The process is designed to identify an informed and willing host community with a safe, geologically suitable site to store Canada's used nuclear fuel in a deep geological repository (DGR). The DGR is part of the Adaptive Phased Management (APM) approach - Canada's plan for the long-term management of used nuclear fuel. The Municipality of South Bruce voluntarily entered the process in 2012 and has continued to learn about, and explore, the project since then with the help of the South Bruce Community Liaison Committee. If it is

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

proven safe, and the community demonstrates willingness to host it, this project has the potential to provide jobs and economic growth to the region. The APM project would bring with it a Centre of Expertise, Surface Facilities and a Deep Geological Repository”.

Opposition has mounted. In February 2020, volunteers with the community group *Protect Our Waterways – No Nuclear Waste* (POW-NNW) collected 1,500 signatures on a petition opposing the deep geological repository. Lawn signs opposing it have sprouted, and community protest meetings have been held. In February 2021 the organization asked South Bruce council to confirm a compelling demonstration of willingness to host a DGR as a binding referendum, requiring a two-thirds majority. POW-NNW says that trying to determine the community’s willingness through means other than a binding referendum is illegitimate, undemocratic and has the appearance of seeking to impose the project on the community through stealth.

The drama’s next act takes place when the results of the residents’ survey are made public.

CANADA: “ONE-EYED” CLIMATE POLICY?

A new Cascade Institute technical paper entitled *Correcting Canada’s “one eye shut” climate policy* describes how our federal government supports oil and gas production growth and recommends policies Canada can implement to phase out oil and gas production to help meet its climate commitments. The paper is at <https://cascadeinstitute.org/technical-paper/correcting-canadas-one-eye-shut-climate-policy/>.

The paper asserts that while Canada has begun to strengthen its climate policies, it does so with “one eye shut” as it continues to avoid the climate consequences of increasing oil and gas production. Rather than constraining oil and gas production as the U.S. is beginning to do, or committing to phase out fossil fuel production as countries like France, Ireland, Denmark, New Zealand and others are announcing, the Canadian government continues to foster growing oil and gas extraction by providing a range of supports to the sector that drive up emissions. To begin to meet its emission reduction targets, Canada must withdraw its support from oil and gas extraction and begin a gradual production phase-out.

According to the paper, Canada has a unique responsibility to join the global first movers that are winding down fossil fuel production because:

- The country has historically benefitted from fossil fuel extraction that has added significantly to global emissions
- Canada has the financial capacity to transition
- Frontline communities have long contested fossil fuel projects.

CANADIAN “MOTHER TREE” EXPERT PUBLISHES HER FIRST BOOK

Suzanne Simard, a forest ecology professor at the University of British Columbia, is one of Canada’s best-known forest researchers. In May she issued her first book, ***Finding the Mother Tree: Discovering the Wisdom of the Forest***. The book is the culmination of her work so far in examining forests as systems in which trees communicate with and help each other through what she calls the “wood-wide web”. Simard’s research suggests that trees communicate below-ground via a vast fungal network: trees form mycorrhizae (literally “fungus-roots”) which are symbiotic relationships between trees and fungi. These mycorrhizal fungi have many branching threads (called mycelium) that grow out from the root tip of a tree and connect with the roots of other trees and plants to form a mycorrhizal network. The mycelium spans vast areas connecting trees and plants across a forest in an expansive underground network. Her research indicates, for instance, that these fungal networks allow birch trees and Douglas firs to

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

share nutrients with each other during the times of year when each species is most in need of nutrient help. In the natural forest, the more the birch trees shaded the Douglas fir seedlings, the more carbon in the form of photosynthetic sugars the birches provided to them through the mycorrhizal network below ground.

She has also studied what she calls “hub trees” or “mother trees” – the largest trees in a forest. Mother trees not only produce many offspring – they also seem to act protectively and preferentially toward their own offspring by transmitting nutrients to them early in their lives.

Simard makes the case for logging practices that keep mother trees in place to speed up forest regeneration, and that keep “helping” species like birch in place to keep the entire forest ecosystem healthy.

Says Simard, who grew up in B.C.:

“Spending time in the forest, as I did as a child, you know that everything is entwined and overlapping, things growing right next to each other. To me, it was always this incredibly connected place, even though I wouldn’t have been able to articulate that as a child.”

On her Mother Tree Project website at <https://mothertreeproject.org/>, Simard says:

“The Mother Tree Project is a large, scientific, field-based experiment that builds on prior research with the central objective of identifying sustainable harvesting and regeneration treatments that will maintain forest resilience as climate changes in British Columbia. The project is unique to British Columbia because of its large scale and replication across a broad climate gradient. It is the first to test partial retention harvesting alongside transfer of genotypes from other climate regions, and to consider Mother Trees as important ecosystem components.”

CATHOLICS TO PLANT ANNIVERSARY TREES IN BANGLADESH

Forests are a natural buffer against severe weather, but deforestation in Bangladesh – spurred by illegal logging, unregulated settlement and clearing of land for industrial agriculture – has decreased this protection.

The Catholic Church in Bangladesh is trying to change that by planting 700,000 trees to celebrate the fifth anniversary of Pope Francis' 2015 encyclical *Laudato Si'*, *on Care for our Common Home*. The effort, launched last August, also marks the 50th anniversary of the creation of Bangladesh, a Muslim-majority country of 165 million people, which has only about 400,000 Catholics.

Each Catholic is asked to plant at least one tree, with special emphasis on coastal areas where storm risk is great, and along rivers where erosion jeopardizes villages. Caritas Bangladesh has joined the effort with a pledge to plant 300,000 trees in the country.

Besides helping to mitigate climate change, trees offer crucial protection in Bangladesh, where floods, cyclones, drought and river erosion claim lives every year. The country lies in the floodplain of the world's largest delta, where the Ganges and Brahmaputra river systems enter the Bay of Bengal. That location makes the country particularly vulnerable to weather-related disasters, including cyclones, flooding and storm surges, as well as the erosion and landslides that accompany heavy rains. The stakes are particularly high for low-lying countries like Bangladesh, where about 20 million people could be displaced, according to the Intergovernmental Panel on Climate Change.

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

TREE GURUS: NOT ALL TREES ARE EQUAL CARBON SINKS

The good news: over 83% of trees planted under Forests Ontario's 50 Million Tree Program are thriving on the landscape and, over time, will sequester significant amounts of carbon, says a new study published in the *Forestry Chronicle*. Its authors conclude that these young Ontario forests prove that carefully-planned and well-executed tree planting programs like those of Forests Ontario offer long-term help to fight climate change.

However, the carbon storage capacity of young trees is limited and the process of planting and caring for young trees, and the die-off of some of them, may actually add to atmospheric carbon. But as a long-term strategy for carbon sequestration, trees are a good bet.

However, some tree species are better at carbon storage than others. The Blue Carbon Program, operated by the American non-profit Conservation International, is a mangrove-related carbon project embraced by Proctor and Gamble, Apple and Gucci – corporations that have announced projects to protect and restore this woody tree or shrub that thrives along salty tropical and subtropical coastlines.

Says Jen Howard, Senior Director of the Blue Carbon Program, "*At a high level, [mangroves] are salty and wet, and that keeps the carbon from breaking down.*" Research suggests mangroves can store up to ten times more carbon than terrestrial forests. Terrestrial trees store carbon in their biomass, while mangroves sequester it in their soil.

Proponents of mangrove afforestation generally see their work not as an alternative to terrestrial afforestation, but as an adjunct to it. And coastal mangroves offer another benefit as buffers of the increasingly common storm surges that arise from global warming.

Among terrestrial trees, the best at storing carbon (on a carbon-per-centimetre-diameter basis) are deciduous hardwoods, particularly long-lived species such as sugar maple, oak, black walnut and hickory. Some softwoods like red pine and white pine are also good carbon storers. Next come softer deciduous trees like birch, red or silver maple and poplar. Conifers like cedar or tamaracks sequester less carbon, but the long life of white cedars adds to their sequestration value.

What looms over all efforts at afforestation is the rate at which existing mature forests in the Amazon and Congo basins, Indonesia and Canadian, Alaskan and Russian boreal forests are depleting the planet's carbon sinks. While afforestation is a crucial investment in future carbon sequestration, a halt to deforestation yields immediate results by preserving what we've got.

Because trees are huggable it's easy to forget that other forms of vegetation create carbon sinks too. Unlike forests, grasslands sequester most of their carbon underground, while forests store it mostly in woody biomass and leaves. When wildfires incinerate trees, the burned carbon they stored is released back to the atmosphere. But when fire burns grasslands the carbon fixed underground tends to stay in the roots and soil, making them more adaptive to climate change.

Grasslands may be a better option in wildfire-prone areas like California. Says Benjamin Houlton, Director of the John Muir Institute of the Environment at the University of California:

"In a stable climate, trees store more carbon than grasslands. But in a vulnerable, warming, drought-likely future, we could lose some of the most productive carbon sinks on the planet. California is on the frontlines of the extreme weather changes that are beginning to occur all over the world. We really need to start thinking about the vulnerability of ecosystem carbon, and use this information to de-risk our carbon investment and conservation strategies in the 21st century."

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

Since 2010, about 130 million trees have died in California's forests due to high tree densities combined with climate change, drought and bark beetle infestation, the U.S. Forest Service reports. Eight of the state's 20 most destructive fires have occurred in the past four years, with the five largest fire seasons all occurring since 2006.

Other often overlooked carbon sink resources are bogs and other wetlands whose oxygen-starved underlayers impede the release of carbon. In Canada, tidal marshes on the Pacific and Atlantic play a major role in carbon sequestration.

PARLIAMENTARY COMMITTEE PROMOTES ZERO EMISSION VEHICLES

In April the Canadian Parliament's Standing Committee on Environment and Sustainable Development issued a report urging the government to develop policies that accelerate the adoption of zero emission vehicles (ZEVs – generally, electric vehicles). Entitled *The Road Ahead: Encouraging The Production And Purchase Of Zero-Emission Vehicles In Canada*, the report starts by saying:

"Given that the transportation sector is Canada's second-largest source of GHGs, the use of ZEVs is an important pathway to cutting Canada's emissions. With that in mind, the Committee studied how Canada could encourage the production and purchase of ZEVs in Canada.... The Government of Canada has set ambitious targets to get more ZEVs on Canadian roads. Ultimately, it aims for ZEVs to make up 100% of new light-duty vehicle sales by 2040. However, the Committee heard that Canada will not fulfill the federal sales targets unless it takes additional measures to encourage the adoption of ZEVs.... There are clear advantages to putting more ZEVs on the road. These vehicles can help Canada address climate change, reduce air pollution, create jobs and strengthen the country's economy. By taking additional measures to encourage the uptake of ZEVs, the Government of Canada will be helping to deliver tangible and lasting benefits to Canadians... The relatively higher purchase price of ZEVs, relative to conventional vehicles, makes it harder for some Canadians to afford them."

The Committee recommends that the Government fund ZEV incentive programs, while making these adjustments to improve program accessibility:

- Allowing used ZEVs to be eligible for incentives
- Adding a scrappage initiative
- Scaling the incentive to income
- Reviewing the price cap of the program, in light of the pricing strategy adopted by automakers, including Tesla.

The Committee also recommends that the Government of Canada facilitate the continued development of domestic supply chains for the full lifecycle of ZEV components, including batteries, and that the Government work with provinces and territories to develop recycling and end-of-life management strategies for ZEV batteries.

The Committee recommends that the Government work with provinces and territories to revise building codes, including the forthcoming national model building codes, to encourage installation of charging stations in new commercial and multi-unit residential buildings, and to encourage voluntary installation of chargers in new single-family dwellings.

The report is at <https://www.ourcommons.ca/DocumentViewer/en/43-2/ENVI/report-3/>.

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

WATER SHORTAGES IN CANADA?

An article entitled *Canada's troubled waters*, recently published in *University Affairs*, claims it's a myth that Canada has an abundance of readily accessible water, and it says we poorly manage what we do have. The article is at <https://www.universityaffairs.ca/features/feature-article/canadas-troubled-waters/>.

Rob de Loë, a professor in the faculty of environment, resources and sustainability at the University of Waterloo, says much of Canada's water is simply not accessible. Although we possess about 20% of global freshwater resources, only seven percent is considered renewable, and most of that drains north toward Hudson's Bay and the Arctic Ocean, putting it out of reach of the roughly 90% of Canadians who live within 160 kilometres of our southern border. *"You tell people in Ontario that we have a limited amount of water and they will point to the Great Lakes and laugh,"* he says. *"But you can only take a modest amount of water from the lakes without doing damage. The lakes aren't like a keg at a college beer party where you empty one, then just roll out another one."*

Part of our poor water management stems from an antiquated jurisdictional patchwork. Maude Barlow, in her 2016 book *Boiling Point: Government Neglect, Corporate Abuse and Canada's Water Crisis*, described our water protection regulations as uneven and inadequate, comprising *"outdated, vague and even conflicting regulations with no coherent overarching principles or rational planning. Many of our laws were originally enacted well over a century ago for a country that was still largely rural and agrarian and whose population mostly extracted water for their own use."* The federal government states that 20 separate federal departments and agencies share responsibility for freshwater across Canada, yet there is no federal law that governs the standard for drinking water. This responsibility lies with provinces that create their own guidelines – some excellent, some poor.

A recent study of 16 Canadian cities conducted by the Intact Centre on Climate Adaptation at the University of Waterloo found that these municipalities had made little progress in limiting their risk of flooding over the past five years, scoring an average of C+ in flood-readiness. And although diminished western snow packs and extended heatwaves lead to droughts, few Canadian jurisdictions have drought plans.

FEDERAL GRITS SEEK NDP SUPPORT FOR CLIMATE BILL

Canada's Minister of Environment and Climate Change Jonathan Wilkinson has put forward changes in response to NDP concerns about Bill C-12 that would make the federal government more accountable as it strives to reach net-zero carbon emissions by 2050. The minority Liberal government needs the support of at least one major opposition party to get the bill passed.

Bill C-12 would require that starting in 2030, Ottawa set rolling five-year targets to cut greenhouse gas emissions ending in 2050, when this pollution is supposed to be either eliminated or captured in the ground. Citing the potential influence of "climate activists" on a panel set up to advise the government, the Conservatives are trying to quash the bill.

The NDP has asked the Liberals to set a 2025 milestone target to deal with what it calls a lack of accountability on reducing emissions over the next decade. Environment minister Wilkinson said in a recent letter to several NDP M.P.'s that he supports improved accountability and wants to include in Bill C-12 Canada's newly announced goal of slashing greenhouse gas pollution between 40% to 45% below 2005 levels in the next nine years. The previous goal had been 30% under Paris Agreement, but the Liberals say under existing measures we can get to 36%.

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

Wilkinson says the government's proposal for better short-term accountability includes added progress reports in 2023 and 2025 on top of one set for 2027. His letter says the additional reporting requirements could include estimates of projected greenhouse gas emissions over time as well as projected reductions resulting from measures taken, to ensure Canadians have a clear and publicly available picture of Canada's path to meeting its enhanced 2030 target

REGULATOR: TRANS MOUNTAIN PIPELINE CAN SHIELD ITS INSURERS

Trans Mountain Pipeline's effort to keep its insurers' names confidential has been accepted by regulators – a setback for environmental groups opposed to development of the Canadian oilsands. *“Trans Mountain has satisfied the requirements for confidentiality,”* the Canada Energy Regulator said in its recent decision: *“The names of Trans Mountain’s insurers could reasonably be expected to prejudice its competitive position in its dealing with potential insurers.”*

Opposition to oilsands extraction led Trans Mountain to seek to protect insurers that face pressure to drop coverage of its pipeline from Alberta to the Canadian Pacific Coast. Construction of the project began last year after Canada's government bought Trans Mountain in 2018 for CA\$4.5 billion from previous owner Kinder Morgan, that threatened to scrap the project due to the fierce pushback. Last year, Zurich Insurance Group AG removed its policy.

Said Charlene Aleck, spokesperson for Tsleil-Waututh Nation Sacred Trust Initiative:

“The Canada Energy Regulator is expanding Trans Mountain’s culture of secrecy when it should be doing the opposite, especially for a government owned company during a climate crisis. This is a dangerous precedent.”

PACHAMAMA PROJECT HELPS REFUGEE WOMEN FACING “PERIOD POVERTY”

In July 2020 Ella Lambert, 20, a University of Bristol languages student from Chelmsford England, started The Pachamama Project – her vision to provide washable, reusable sanity pads to women in refugee camps in Greece and Lebanon. Says Lambert:

“The people I want to help in these camps, they're experiencing period pain and having to use random tissue paper, cardboard, socks, scraps of material, and even leaves — whatever they can get hold of... Period poverty was already a global issue, but the Covid pandemic has shone a light on the most vulnerable in every society... We are able to make a tangible difference to allow women to help maintain cleanliness and dignity in such difficult circumstances. Our washable pads are easy to make and will, we hope, make a huge difference to people already facing unimaginable daily challenges.”

The first installment of her products were produced by three volunteers and delivered in August 2020. By January of this year, aided by her friend Oliwia Geisler, Lambert had recruited 150 volunteers sewing the pads, often using scrap material that would otherwise end up in landfills. She now has 700 volunteers worldwide. Women in the U.K., Italy, Greece, Lebanon and the U.S. have all made them, and refugee women themselves in Lebanon have formed sewing groups to make the pads, which can be used for an estimated five years.

Lambert explains the project's name on its website:

“Pachamama is the goddess of fertility and greatly revered by the indigenous people of the Andes. Pachamama is the Mother Earth of Inca mythology celebrated in Argentina, Chile, Ecuador, Bolivia and Peru. In a month-long celebration in August, people still celebrate her to this day. Pachamama: A warm and charismatic image of sisterhood and the perfect figurehead for this community project.”

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

In October 2020, 16-year-old Luke Lambert, his friends and a number of people across the U.K. ran for 50 kilometres in 5 days to raise money for The Pachamama Project. The distance represents the journey from the city of Aleppo in Syria to the Turkish border, a route many Syrian refugees have had to take to get to safety.

The Pachamama Project website is at <https://www.thepachamamaproject.org/>.

SPAIN TOUTS TOLL ROADS

Spain plans to introduce tolls on all state and regional highways, consistent with the European Union's principle of "polluters pay." It has told the EU that the system will be in place on 12,000 kilometres of high-capacity motorways by 2024, affecting both passenger cars and trucks, and may later be applied to 14,000 kilometres of other national roads. Drivers would pay to use the network of *autopistas* (highways that charge a toll, although some have partially been made toll-free in recent years) and *autovías* (high-speed motorways that are free of charge).

Spain's proposal is part of a wider plan to converge with the rest of Europe, where the largest economies have introduced tolls on many of their motorways.

The plan appears to target all road users, including passenger cars and trucks, and regardless of nationality. The plan suggests offering discounts to "financially underprivileged groups or regular road users on certain road sections." Spain has pledged to seek payment formulas that place the financial burden on freight contractors, not on truck drivers. Aware that this will be an unpopular measure, the government is planning a public relations campaign aimed at the transportation sector and the public.

Spain has the most extensive high-capacity road network in Europe, and growing maintenance costs are a burden on the national budget. Says the plan:

"The introduction of a pay-per-use system would guarantee maintenance of the road network, and generate incentives for a more efficient use of this mode of transportation, which in turn would lead to a reduction in greenhouse gas emissions."

STUDY: MIDDLE EAST AND NORTH AFRICA FACE TORRID FUTURE

The results of a climate study of the Middle East and North Africa (MENA) recently published in the on-line journal *npj Climate and Atmospheric Science* paints a stark portrait of the region unless there is a major reduction in greenhouse gas emissions. Says the study abstract:

"Our results, for a business-as-usual pathway, indicate that in the second half of this century unprecedented super- and ultra-extreme heatwave conditions will emerge. These events involve excessively high temperatures (up to 56 °C and higher) and will be of extended duration (several weeks), being potentially life-threatening for humans. By the end of the century, about half of the MENA population (approximately 600 million) could be exposed to annually recurring super- and ultra-extreme heatwaves. It is expected that the vast majority of the exposed population (>90%) will live in urban centers, who would need to cope with these societally disruptive weather conditions."

The article is at <https://www.nature.com/articles/s41612-021-00178-7>.

MENTAL HEALTH GROUPS HIGHLIGHT CLIMATE CRISIS

The Climate Psychology Alliance of North America is creating an on-line directory of climate-aware therapists, defined as professionally-trained psychotherapists who recognize the current

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

climate crisis both as a globe-spanning challenge to the sustainability of human and non-human life on Earth and as a personal challenge with many psychological impacts, who accept that new forms of distress arise from the crisis, and who believe that the professional training of the allied mental health therapy and counseling community can help people deal with this distress.

The directory, at <https://www.climatepsychology.us/climate-therapists>, can be searched by country or city. It currently lists only three Canadian therapists – one in Toronto and two in B.C.

In the U.K., the Royal College of Psychiatrists recently declared a climate and ecological emergency because of the mounting mental health implications of the climate crisis. The Royal College's Position Statement (including its recommendations) is at

<https://www.rcpsych.ac.uk/docs/default-source/improving-care/better-mh-policy/position-statements/position-statement-ps03-21-climate-and-ecological-emergencies-2021.pdf> .

The Position Statement calls for:

“a combined effort across the health sector, referencing a holistic approach to health that reframes our relationship with our planet, nature and all life on earth. Swift and decisive action from government and NHS [National Health Service] leaders is essential, but individual psychiatrists can also play a part in tackling the environmental problems we face.”

The Statement claims that the NHS is a major contributor to carbon emissions, accounting for 4% to 5% of total carbon emissions in England in 2020.

BERKELEY CALIFORNIA CALLS FOR DIVESTMENT FROM ANIMAL AG COMPANIES

On April 27, Berkeley became the first U.S. city to urge its public employees' retirement system to divest from industrial animal protein and factory farming companies. California Public Employees' Retirement System (CalPERS), of which Berkeley is a member, invests nearly us\$679 million in industrial animal protein and factory farming companies.

The impetus to shun pension fund investment in factory farming goes beyond doing social good – it's also risky investment, says a 2016 study *Factory Farming: Assessing Investment Risks*. According to that study, *“Animal factory farming is exposed to at least 28 environmental, social and governance issues that could significantly damage financial value over the short or long-term. Many of these risks are currently hidden from investors.”* This study is at <https://www.berkeleyside.org/wp-content/uploads/2021/04/FAIRR-Report-Factory-Farming-Assessing-Investment-Risks-Summary-Report.pdf>.

U.K. TO STRENGTHEN ANIMAL PROTECTIONS

The U.K.'s Secretary of State for Environment, Food and Rural Affairs, George Eustice, has announced his government's commitment to pass new and enhanced animal welfare laws suggested by the government's recently published *Action Plan for Animal Welfare*. The Plan can be accessed at <https://www.gov.uk/government/publications/action-plan-for-animal-welfare>.

The government will enshrine in legislation the concept of the sentience of many animals – acknowledging their capacity to feel hunger and pain, and recognizing that they are aware of what happens to them. But this recognition has limits: It will apply to vertebrates, not to animals such as octopi and squid (species shown to be intelligent and adaptive). Eustice has also said that ensuing legislation will focus largely on pets and livestock rather than wild animals. He also said an expert animal sentience committee will advise on policy flowing from the Plan.

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

The Plan calls for:

- A ban on exporting live animals for slaughter
- Outlawing the keeping of primates as pets and banning the import of hunting trophies
- Compulsory microchipping of pet cats (dog microchipping is already compulsory)
- Banning remote-controlled training collars for dogs
- Banning the sale of *foie gras*, a food made from the livers of force-fed ducks or geese
- Prohibiting the caging of poultry and the practice of restricting the movement of pregnant and suckling pigs in "farrow cages"
- Banning ads for "unacceptable animal practices abroad" such as elephant rides
- Prohibiting the export of "detached shark fins"
- Implementing the Ivory Act banning the sale of ivory
- New laws to crack down on hare coursing (the pursuit of hares with hounds that chase the hare by sight, not by scent – currently illegal throughout the U.K.).
- More powers for police to protect farm animals from dangerous or out-of-control dogs
- Legislation to restrict the use of glue traps designed to capture rats and mice.

However, there is no plan to require imports to meet the same welfare standards as in the U.K., which the National Farmers' Union describes as "hypocrisy".

GIZMO CORNER: SOLAR CANALS?

Two University of California engineering researchers, Robert Bales, and Brandi McQuin, have come up with a way to kill two California birds with one stone, by covering irrigation canals with solar panels. Say the engineers:

"As engineers working on climate-smart solutions, we've found an easy win-win for both water and climate in California with what we call the 'solar canal solution.' About 4,000 miles of canals transport water to some 35 million Californians and 5.7 million acres of farmland across the state. Covering these canals with solar panels would reduce evaporation of precious water – one of California's most critical resources – and help meet the state's renewable energy goals, while also saving money... In a recent study, we showed that covering all 4,000 miles of California's canals with solar panels would save more than 65 billion gallons of water annually by reducing evaporation. That's enough to irrigate 50,000 acres of farmland or meet the residential water needs of more than 2 million people. By concentrating solar installations on land that is already being used, instead of building them on undeveloped land, this approach would help California meet its sustainable management goals for both water and land resources... Our estimates show that it could provide some 13 gigawatts of renewable energy capacity, which is about half of the new sources the state needs to add to meet its clean electricity goals: 60% from carbon-free sources by 2030 and 100% renewable by 2045... Building these long, thin solar arrays could prevent more than 80,000 acres of farmland or natural habitat from being converted for solar farms."

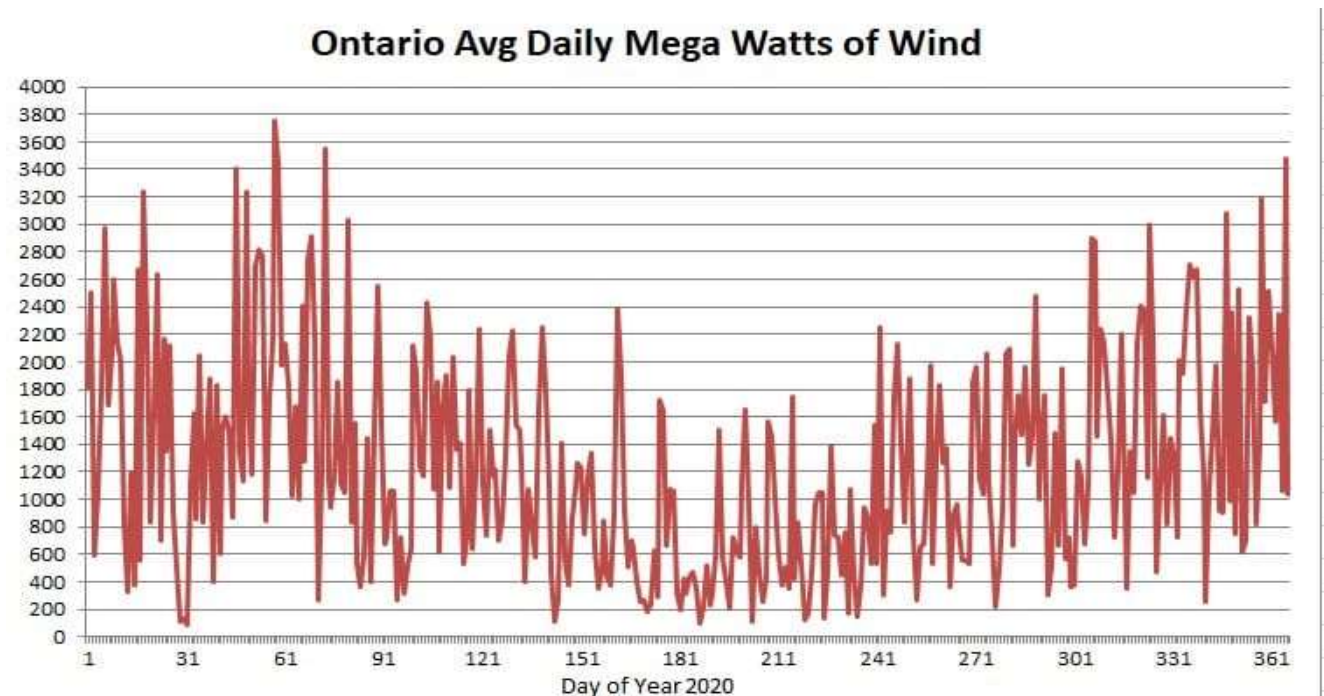
THE VILLAGE GREEN

Number thirty-one, May 16, 2021

OUR READERS KNOW A THINK OR TWO: WIND LIMITS?

David Lang is a dear reader who (unlike me) can count beyond ten without using his fingers and toes. His calculations and insights below remind us of current green power limitations and thereby show us challenges to be overcome:

“Recently I obtained hourly electricity supply data by fuel type for Ontario from the IESO (Independent Electricity System Operator). The chart below displays the wind power supply for each day in Ontario. I averaged the hourly data in each day to get a daily amount. The horizontal axis is days of 2020 starting on Jan. 1 and ending on Dec. 31. The vertical axis is Megawatts.



The chart illustrates the extreme variability of the wind supply in Ontario. Since I averaged the hourly supply to create a daily supply, the hourly supply is even more variable.

It is also notable that the supply falls off in the summer months. Currently in Ontario electricity demand peaks during the warm summer weather. The objective of grid management is to match supply with demand, essentially instantaneously. As the percentage of wind and solar increases, grid management becomes a real challenge.

It is clear that energy storage is required to reduce the variability in supply.

Transmission is another issue. Transmission lines are designed based on peak power carried. Since the peak power from a wind farm is much greater than the average power, the cost of transmission would be very high on the basis of energy transmitted.

Energy storage at the scale required is very expensive. The high cost of transmission suggests that storage which is relatively close to the wind farm would be favorable. Lithium ion battery storage at the scale required would be extremely expensive. Pumped storage is a good alternative. A greater degree of integration with the Quebec grid would open up opportunities for storage using Quebec's reservoirs.

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

Hydrogen might be a good storage alternative. Hydrogen produced by electrolysis of water, using wind generated electricity, could be stored for use in a hydrogen fuel cell power plant or to power industrial machinery. The down side is that the round trip efficiency is fairly poor. Typically, electrolysis of water is about 70% efficient; a fuel cell might turn hydrogen into electricity at about 60% efficiency. With these assumptions the end to end efficiency would be just over 40%.

I think that many of us tend to oversimplify the use of wind and solar power on our electricity grid. Like many things the devil is in the details.”

IN MY HUMBLE OPINION: A DECADE AT THE RACES

When was a teenager I sometimes journeyed from Sudbury to Toronto’s Woodbine racetrack with my father and his fellow horse-race friends. My father was an astute, informed and controlled bettor, usually winning more than he bet. I, on the other hand, was uninformed. I usually bet based on the horse’s name (Chinese Bandit was my all-time favorite) or because I liked the name of the jockey (Avelino Gomez topped my list).

These horse races crossed my mind when I read David Lang’s analysis of wind power (above). It seems to me that we are still in the early stages of green technology evolution, with many technologies in the race and more added every day. Some techno-horses seem attractive at first, but as we watch them race we see their imperfections. They will either improve as they are better trained or better ridden – or they will be put out to pasture, replaced by improved steeds.

There is wastage in the hit-and-miss experimental early stages of a new technology’s development. As we watch techno-horses perform, we learn which ones to bet on, which ones to tinker with and which ones to discard. If we waited for the perfect horse to be bred, we would have no racehorses, no races and no horseshoe garland of roses in the winner’s circle.

Some of us might respond to the uncertainties of the race and the imperfections of individual techno-horses by giving up on technology altogether, pointing merely at its unachieved potential as our proof that technology has no role to play in addressing climate change. Or we might attach ourselves to particular technologies for the wrong reasons – because we like their names (the Chinese Bandits and Avelino Gomezes of green technology) or because they’re pretty or because we can’t be bothered to learn how to better evaluate or breed horses.

I admired my father’s skill at evaluating horses before he bet on them. And I admire the David Langs of our world, who help us to evaluate and improve our technologies, rather than rejecting them out of hand or uncritically accepting them.

By the way, my father’s horse assessment skills weren’t perfect. I remember Chinese Bandit because I wanted to bet on him in a Queen’s Plate Day race. Being under-age I couldn’t bet, so I gave my two dollars to my father and asked him to bet on long-shot Chinese Bandit for me. Not wanting to see his cash-strapped son lose two bucks, he bet on another horse with my money.

Chinese Bandit won.

Respectfully submitted to the *polis*,
John Butler

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

SHE SAID / HE SAID

“Now, if Trump had had another four years in office, we might have literally reached tipping points that were irreversible, or come very close to them. His major policy programs were to destroy the environment as quickly as possible, maximize the use of fossil fuels, and eliminate the regulatory apparatus that somewhat controls them, with the goal of increasing short-term profit for sectors of industry, fossil fuels, and others. This is the most malicious program in human history. It’s barely discussed; that’s not what Trump is criticized for. But whatever else he did pales into total insignificance compared with this. Another four years of it, and we might have been pretty near the finish line. Fortunately we were spared that, though it might come back in two or four years.”

Noam Chomsky, in an interview with Alternative Radio host David Barsamian,
March 15, 2021

“On May 27, 2008... I was among several hundred people gathered at Queen’s Park, Toronto, in support of the Mother Earth Protectors’ ceremonies and political demonstration for the communities of KI, Ardoch Algonquin First Nation, and Asubpeeschoseewagong Netum Anishinabek (Grassy Narrows First Nation) and for Bob Lovelace and the KI-6, imprisoned for following Anishinaabe law in the face of a Canadian court order... Two years have passed and I better understand the inherent goodness of my legal traditions. I draw strength from Alice Williams and so many others who live Anishinaabe law, despite shameful, ongoing Canadian colonialism, in their daily lives. I carry with me Robert Lovelace’s message that protest at its best isn’t merely angry. The truth is that no matter how we feel about someone or what they’ve done to us, in a conflict situation, someone worries about each of us...

I end this discussion in a circle, returning to where we began. In the same essay in which Bob Lovelace spoke of the nature of protest, he wrote ‘The Warriors’ responsibility is to encourage and protect the healing process in their communities.’

I am Wapshkaa Ma’ingan, Bear Clan Anishinaabe. This paper is my protest.”

lawyer Aaron Mills, *Aki, Anishinaabek, kaye tahsh Crown* (an essay on Anishnaabe law and its devaluation in the eyes of Canadian law), *Indigenous Law Journal*, Volume 9 Issue 1, 2010

“I contrast in broad sweep two different psychic positions. One is living on Planet Earth and the other is living on Planet La La. Of course, individuals and groups can and do move between the two positions.

Here is what the world looks like when living on Planet Earth. We have less than ten years to drastically reduce emissions. By drastic reduction I mean by 90% in the global north. This is the optimistic picture, with an increasing number of scientists now fearing that because of the chronic lack of government intervention to address climate the world has already tipped into an unstoppable trajectory heading towards ecocide.

I now turn to Planet La La. The reality is that many people are living a bubble-like existence on Planet La La. It is a world of fake reality that pretends to be the real world but this is a world with all the anxiety and guilt airbrushed out or pushed down into the unconscious where it can only bring future trouble.”

psychoanalyst Sally Weintrobe in her keynote speech to the U.K.’s Royal College of Psychiatrists annual conference, April 2021.

THE VILLAGE GREEN

Number thirty-one, May 16, 2021

“Canada has more than 800 species of wild bee, from ground-nesting mining bees and bumblebees to cavity-nesting mason and leafcutter bees. They have quietly been pollinating our gardens, meadows and crops. It is time to show them the love they deserve by offering the basic amenities – food and shelter – in our yards and balconies.”

David Suzuki Foundation website <https://davidsuzuki.org/action/beebnb/>

“Laudato Si' Week 2021 begins May 16 and runs until May 25. The time frame coincides with the date, May 24, 2015, when Pope Francis signed his first solo encyclical and the first-ever papal document centered on the environment. This year's Laudato Si' Week pulls its theme from part of the pope's appeal in the document's introduction: 'For we know that things can change.' The events will celebrate the church's progress so far in acting on the landmark encyclical, with the goal of launching a massive multiplication of Catholic engagement around conservation, sustainability and changing the current trajectory of global warming.”

Brian Roewe in *Earthbeat*, May 14 2021 edition

Spring frost
dancing in the air
a shimmer of heat

Masaoka Shiki (1867-1902)

Popcorn Trees

Our popcorn trees are poppin'!
Actually they're plum trees gone wild.
The bees will be here soon
(you can hear them buzz from the balcony).
The birds are looking forward to feasts
on the little fruit.
Another year begins.

Regards,
David

May 13 e-mail message to friends from
David McLaren of Neyaashiinigiing

For information about *The Village Green*, or to subscribe to it (free), please contact John Butler at 519 923-6335 or agora@xplornet.com