

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

WANNA HELP GROW THE GROWERS?

It's spring we smell the earth again, and many minds turn to gardening. Some of our minds turn to the role of gardening within the broader field of locally-focused food sustainability ("local" in the sense of locally produced and locally consumed food).

The Grey Highlands Climate Action Group (CAG) began to tackle this issue at its April 8 Zoom meeting. Their deliberations were shaped in part by the observations of Chatsworth resident and CAG member Vitold Kreutzer, who advocates for a broad range of community gardening – from municipally-sponsored community gardens, to less formal relationships between a gardener with land and others who use part of that garden, or people who don't garden but make land available to others for gardening. Community gardening can also include community support for local farmers who provide food at local markets, stores and food banks or who establish contractual or co-investing relationships with local consumers. The varieties of community gardening are nearly endless, says Kreutzer, who also points out that joint action on food sustainability goes beyond food. It also helps build community cohesion and resilience – forms of social capital that can be used to address a whole range of community issues.

The Grey Highlands CAG is exploring the creation of a Grey Highlands CAG members' garden that would require (according to advice from Kreutzer) **expertise, land and labor**.

The CAG has put out a call to its members for all three of these resources. If any of our dear readers – CAG members or not – would like to offer land, expertise or labor to help create a Grey Highlands garden, please contact Joyce Hall, the Grey Highlands CAG Chair, at greengreycounty@gmail.com.

Beloved Editor's Note:

The Grey Bruce Sustainability Network and its partners are creating an on-line platform to help climate and environmental activists and groups learn about and connect with each other. Perhaps this platform could help people and groups in Grey and Bruce who are interested in community gardening and other forms of food sustainability to learn, share, plan, problem-solve and support each other, leading to a late 2020 Bruce and Grey "food summit".

GREY HIGHLANDS COUNCIL: MAKE COMMUNITY GARDENS AN ESSENTIAL SERVICE

The Government of Ontario designated essential services that are allowed to operate during the pandemic. Community gardens weren't on the list. On April 15, Grey Highlands Councillor Danielle Valiquette presented a motion to Grey Highlands Council to ask the Government of Ontario to designate community gardens as essential services, since they play a key role in food security. Given the urgency of the issue now that planting season is near, the Council waived its requirement that a notice of motion be presented one meeting in advance of a vote on the motion, and voted to ask that community gardens be designated as essential. Councillor Valiquette, as well as members of the Grey Highlands Climate Action Group, encourage municipalities, climate groups and individuals from across the region and the province to write to Premier Ford and the local MPP in support of designating community gardens as essential.

British Columbia had also excluded immunity gardens from its list of essential services, but reversed that decision in the face of public support for the crucial role of community gardens.

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

ONTARIO USES COVID-19 AS EXCUSE TO SUSPEND ENVIRONMENTAL RULES

In early April the Government of Ontario issued a regulation temporarily suspending rules for government review of environmental issues – a rule change that environmentalists consider unnecessary and a sign of the current government's dismissal of environmental concerns.

In a posting on the Lexicology website the legal firm of McCarthy Tétrault LLP described the regulation and pointed to its over-reach:

*“On April 3, 2020 and in response to the COVID-19 pandemic, the Ontario Government passed a regulation that temporarily exempts government proposals from the posting requirements of the Environmental Bill of Rights, 1993 (the “EBR”). The regulation also removes the requirement for government decision makers to consider the principles set out in ministries’ Statements of Environmental Values in making decisions on policies, acts, regulations and instruments. Part II of the EBR requires certain government ministries to inform the public about environmental acts, regulations, policies and instruments (such as, for example, environmental approvals) that are being considered and/or proposed. Where environmental decisions are significant, the public is given the opportunity to review and comment on these proposals and the ministries are required to consider the comments in making decisions. **It is interesting that the government chose to pass a regulation that provides a broad exemption from public participation for all new policies, acts, regulations and instruments, rather than one targeted solely on proposals that are related, in some way, to the COVID-19 pandemic** [emphasis added].”*

Climate action groups are concerned about the rule change. Joyce Hall, Chair of The Grey Highlands Climate Action Group, has suggested that citizens send hard copy letters of concern to their local MPP, Premier Ford, the leaders of the Green, NDP and Liberal parties, and the NDP environmental critic. Hall says the aggregate industry is already trying to exploit the relaxed rules. She identifies these sources of information on the issues:

- <https://www.nationalobserver.com/2020/04/08/news/ontario-suspends-environmental-oversight-rules-citing-covid-19>
- <https://environmentaldefence.ca/2020/03/30/amid-covid-19-crisis-aggregate-lobbyists-pushing-deregulation-environmental-cuts/>

Other jurisdictions have also used the pandemic as a pretext to ignore environmental rules. On March 26, the U.S. Environmental Protection Agency (EPA) said it wouldn't enforce a range of legally mandated public health and environmental protections on the grounds that industries would find it hard to comply with these protections during the pandemic. The EPA decision was sweeping, cancelling fines and other penalties for companies that fail to monitor, report or meet many requirements for release of pollutants. In response, a coalition of environmental groups petitioned the EPA to publish an emergency rule requiring polluters that take advantage of relaxed standards to notify to the EPA in writing. The petition also called on the EPA to make that information public. The EPA ignored the petition, so the Natural Resources Defense Council is suing the EPA on behalf of a coalition of nearly two dozen environmental justice, climate, and public interest groups. The lawsuit asks the court to force the EPA to respond to the petition proposing the emergency rule.

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

WHITHER CLIMATE ACTION IN PLAGUE TIME?

The Bruce-Grey Owen Sound Climate Action Team will hold its next meeting using Zoom on Thursday April 23 at 7:00 PM. The highlight of the meeting will be a visioning session on the question **“Has our role changed as a result of the COVID crisis?”** – a question most climate action groups are asking right now. The Collingwood Climate Action Team has partly answered the question by helping pandemic volunteers. Says the Collingwood CAT’s April 16 newsletter:

“With the unprecedented situation we all find ourselves in we have an opportunity to put the power of our community to good use in a different way. The CCAT leadership team is supporting this urgent and valuable effort to help with COVID 19 by making and distributing cotton face masks in our community... a local woman, Michelle Bylow has launched a national campaign through RAW Canada to make masks to distribute to anyone or facilities in need or wanting masks... here is also a local group who have been making face masks – initially for senior homes and now for others in the South Georgian Bay community. They are going to join forces with Michelle’s initiative and accelerate the production and distribution.”

The CAT has issued a call for volunteer sewers to sew face masks and volunteer couriers to drop off supplies to sewers and/or to collect and deliver completed masks to drop-off locations.

- To volunteer to sew, please go to <https://docs.google.com/forms/d/e/1FAIpQLSd-t7qx9wkaxHjrWUcTIYwxFudAT3qbYRI3iSH1cibLcCPbGg/viewform>.
- To volunteer to be a courier, please go to <https://docs.google.com/forms/d/e/1FAIpQLSfRXkh5jmknIFzyi-4mrx6fA5hK1YJzp8MHRHkRqAFAED501A/viewform>.

SMALL FIRMS & VOLUNTEERS HELP MAKE PANDEMIC PROTECTIVE GARB

The volunteer activities championed by the Collingwood CAT harks back to the war years, when volunteers created vast amounts of material to send to soldiers. An example of that spirit, from Walters Falls, was published in the *Markdale Standard* on January 10, 1918:

“The Patriotic League held their regular meeting in December. There was a bale of soldiers’ comforts packed and forwarded to the Red Cross. The bale contained 54 pairs of socks, 8 pillows, 12 pillow covers, 38 vermin shirts. The following donated the work.

Mrs. Shepherdson, 1 pair of socks, 3 shirts;	Mrs. Ptolemy, 1 pair socks, 6 pillows, 2 pillow covers;
Mrs. Brown, 2 pairs of socks, 4 shirts;	Mrs. W. White, 1 pair socks;
Mrs. Thompson, 1 pair socks, 2 shirts;	Mrs. R. Bowler, 6 pair socks;
Mrs. Bonnell, 4 pair socks, 4 shirts;	Mrs. R. W. Quinton, 1 pair socks;
Mrs. R. H. Olmstead, 2 pair socks, 4 shirts;	Mrs. McCullough, 1 pair socks, 2 shirts;
Mrs. Robbins, 4 pair socks;	Mrs. Sutherland, 5 shirts, 3 pillows;
Mr. Burchall, 2 pair socks;	Mrs. Barker, 3 shirts;
Mrs. A. Smith, 8 pair socks;	Mrs. Wm. Dixon, 3 shirts;
Mrs. Jones, 1 pair socks;	Mrs. L. Deleree, 3 pair socks, 7 shirts;
Mrs. W. G. Dixon, 1 pair socks, 2 shirts.	Mrs. A. McCaulay, 1 pair socks;
Mrs. J. Dixon, 1 pair socks;	Mrs. Thom, 1 pair socks;
Miss Alva Dixon, 8 pairs socks.”	

That volunteer spirit has a high tech edge across the world today. With health workers facing shortages of personal protective equipment (PPE) due to the pandemic, households and small businesses are turning their 3D printers into factories to create essential supplies. Some engineering enthusiasts have turned these initiatives into recycling projects.

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

Communities such as 3DCrowd UK group and private companies supporting the cause are encouraging volunteers to join. The Czech 3D printer company Prusa Research has made its open-source design for plastic face shields available on its website, saying *"anybody with a 3D printer can join and help professionals in their area."*

Float Digital, an online marketing agency in Falmouth, U.K., uses recycled plastic bottles to create face masks. Another open-source technology developer, Precious Plastic, engaged its community by creating templates for volunteers. The company shares solutions for people to reuse plastic waste and starts companies that make items from alternative plastic sources. Workshops around Europe have used their machines to shred and re-mold old plastic. Precious Plastic Grand Canaria has shared designs for intensive care respirator masks and worked with Spanish Precious Plastic La Safor to develop their own versions of face visors.

It's not only masks that are being created. Greek retail company AluMoulds joined forces with a Swiss counterpart to design hand-free door openers that reduce the spread of the virus from surfaces like door handles that are touched by lots of people. In the Philippines, face shields and masks made of recycled materials are being created by the Research and Development Centre of the Philippines Air Force out of plastic bottles and used cloth. This protective gear is for soldiers working at border checkpoints and healthcare providers. In Venezuela, volunteers are making face shields in small workshops, offices and living rooms with 3D printers in their living rooms. A community of three makeshift factories grew into a chain of volunteers who use donated recycled plastic. They've completed 8,000 face shields in the last three weeks.

APRIL 22: EARTH DAY PANEL DISCUSSION ON YOUTUBE

Fridays for Future, the youth-led climate action movement, is hosting an on-line panel discussion on **Wednesday April 22 at 7:00 pm**. Panelists will be film-maker, poet and climate activist Liz Zetlin, and Owen Sound Municipal Councillor John Tamming (a member of that Council that "gets it" in terms of climate action). The discussion will be moderated by Aidan Randall and Lydia Dyck, two Fridays for Future leaders in Grey-Bruce. Viewers can watch on YouTube or join the Zoom Webinar to ask questions to the panelists at the end of the program and chat online with other attendees. To participate in the Zoom Webinar, please register at https://zoom.us/webinar/register/WN_Z8Uud67CS5uiV7AOMBiHhg.

FEDS ANNOUNCE GREEN STIMULUS PACKAGE FOR CANADA'S OIL COUNTRY

For weeks, Canadians have been waiting to see if the Government of Canada would create a stimulus package that would bail out oil industries in the name of preserving jobs, or whether the government would use stimulus money to help create a transition to green jobs and industries.

This week Prime Minister Trudeau announced a package that commits \$1.7 billion to cleaning up orphan and abandoned oil wells that continue to spew greenhouse gases into the atmosphere – a problem that has burgeoned as low oil prices lead smaller oil firms to declare bankruptcy. The federal package also includes CDN\$750 million towards an emissions reduction fund to create jobs while cutting pollution. The Government of Alberta has welcomed the initiative while stating that it isn't enough and that a stimulus package for the oil industry is still needed. Odds are that to walk both sides of the street, the feds will create a second oilish stimulus package to rescue what many climate activists – as well as many economists and market watchers – consider to be a dying industry.

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

GREAT LAKES WATERS PLAGUE SHORE DWELLERS

Climate-induced weather changes create tensions between nations as resources and threats distribute themselves differently across the planet. But climate-induced changes create or increase tensions within countries too. We've got an example in our own back yard.

Record-high precipitation in the Great Lakes region, exacerbated by climate change, has produced high water level problems in the Great Lakes – particular Lakes Huron, Erie and Ontario – that pit lakeshore-dwellers and those living on the upper St. Lawrence River against those living along the Lower St. Lawrence and Montreal. If not constrained, high waters rush down the St. Lawrence River, damaging riverfront properties, eroding the river's banks and putting commercial shipping at risk because of strong currents.

Eventually, high waters will flood Montreal. But if the rushing spring-melt waters are held back too long by the only major protection – the Moses-Saunders hydroelectric dam in Cornwall Ontario – shorelines along the upper St. Lawrence and the Great Lakes, particularly Lake Ontario, are inundated and eroded by high water.

Decisions about how much water to release at the Cornwall dam, and when, is made by the Canada-U.S. International Joint Commission (IJC), based on its "Plan 2014" which tries to balance the interests of upstream and downstream communities, the shipping industry, hydroelectric producers and other parties. Plan 2014 (not implemented until 2017) allows Lake Ontario to rise and fall in a wider range than before, in an effort to repair damaged wetlands.

It looks like the conflict has begun again this year, after high-water years in 2017 and 2019. The IJC says it drained as much water as it could from Lake Ontario before the April 1 start of the shipping season, but it recently curtailed outflows because of high water levels around Montreal.

Property owner associations are calling on the IJC to make major revisions to its Plan 2014 (it has already announced it will conduct a two-year, US\$3-million review of its plan). Some local governments as well as the state of New York have taken IJC to court to compel it to reduce Lake Ontario's water level even if it inundates Montreal and other communities downstream.

High water levels have also affected Lake Huron, including Georgian Bay. Said Mary Mutter, the Canadian Chair of the Georgian Bay Great Lakes Foundation:

"Record high water levels have devastated the coastal ecosystem around Georgian Bay destroying critical wetlands needed to nurture the fishery across the upper Great Lakes. I am also concerned that, as septic systems close to the shore become flooded, increased nutrient loading into Georgian Bay could cause massive algal blooms this summer."

But in the rush to criticize the IJC for how it deals with water levels, it's easy to forget that the root of the problem lies with climate-aggregated weather patterns. Said Jane Corwin, the IJC's U.S. section chair, last month:

"A lot of people observe a change in water levels and conclude that it must have happened because of IJC's outflow policies. But the reality is that the water level is affected as much by the amount of water coming in as by the policies for letting water out."

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

MEKONG RIVER: AT CHINA'S MERCY

Climate change aggravates tensions among nations that share major rivers. Decisions about the use of the increasingly scarce waters in those rivers can cause widespread human suffering. This is becoming a major flashpoint among nations that share Southeast Asia's Mekong River.

The glacier-fed Mekong rises in the mountains and high plains of the Tibetan plateau. It flows through Chinese-occupied Tibet, China, Laos, Cambodia, Myanmar, Thailand and Vietnam, emptying into the ocean through the vastly fertile Mekong delta. The upper reaches of the river are a prime source of hydroelectric power. The lower reaches irrigate land that feeds millions.

China has tried to reduce its dependence on coal-fired power plants by building hydroelectric mega-projects on the upper Mekong. This has altered the wet season / dry season flow of the river. In the dry season, for instance, China has reduced the flow of essential irrigation waters by holding back the flows so its reservoirs will be full enough to generate electricity.

In April 2020 the Lower Mekong Initiative (a multinational partnership among Cambodia, Laos, Myanmar, Thailand, Vietnam and the U.S. that addresses complex transnational developments in the Lower Mekong region) published a study, *Monitoring the Quantity of Water Flowing Through the Upper Mekong Basin Under Natural (Unimpeded) Conditions* that demonstrates the enormity of reduced water flows resulting from dams built and reservoirs filled by China in recent years:

"The six [Chinese] dams built since the commissioning of the Nuozhadu Dam in 2012, are compounding the alteration of natural river flow as the reservoirs are filled and water is released. One of the greatest consequences occurred in 2019, when the Lower Mekong recorded some of its lowest river levels ever throughout most of the year".

During the 2019 wet season, China's section of the Mekong had an above average volume of water, but downstream countries faced a drought that dried up parts of the river. China held onto its upstream water to fill its hydropower reservoirs, worsening downstream drought.

Downstream nations face a dilemma. Their agriculture and fisheries are at the mercy of China's decisions, yet Myanmar, Thailand, Laos, Cambodia and Vietnam rely on trade with China. This has limited their ability to exert pressure on Big Brother upriver. Yet while the Chinese government has introduced a global development program that it says will benefit its poorer trading partners, a backlash is growing among countries that feel they are losing out.

TIDAL TURBINES AID ORKNEYS

The U.K.'s Orkney Islands off Scotland have few options to generate power other than burning fossil fuels. This will change, as a result of Scotland's first floating tidal turbine farm, about to be built off Orkney. The first of the two turbines being developed by Scottish firm Orbital Marine Power will be connected to the grid by the end of 2020, with a view to being fully operational in early 2021. The pioneering floating devices will generate enough electricity to power up to 3,400 homes, a third of Orkney's needs. The turbines are being installed at the European Marine Energy Centre in Orkney, a world-leading test and research facility focusing on wave and tidal power development. A video showing how this tidal turbine farm works is on YouTube at <http://www.emec.org.uk/press-release-orbital-set-ambition-on-installing-first-floating-tidal-farm-at-emec/>.

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

DATA CENTRE COOLING SYSTEMS GUZZLE WATER

Water scarcity is a growing problem, and the giant data centres that keep us all online are slated to use billions of litres every year. Filled with computers known as servers, these data centres use a lot of energy that creates heat. Companies tend to place these data centres close to cities and towns – often in hot, dry places where it's hard to get rid of this excess heat. To deal with the heat, water is pumped through the stacks, absorbing heat by evaporating and escaping from cooling towers. These massive cooling processes put stress on local drinking water supplies. According to *Time* magazine, a legal filing for a new facility in Texas suggests that Google could be going through billions of litres every year.

There will be an estimated 7.2 million data centres worldwide by 2021. The demand for online services will increase as more people use the internet to communicate. Many service providers have seen a dramatic increase in the use of online meeting services as well as traffic from streaming services and video games.

New technology and wastewater recycling could help these facilities to curb their water usage. CyrusOne, a company specializing in building data centres, announced in March that it will create its first “net-positive water data centre” in Arizona. It claims that the centre will restore more water than it withdraws by making cooling systems more efficient and by using less water.

U.S. OFFSHORE WIND FARMS PLANNED

Spanish utility group Iberdrola announced plans this month to increase investment in renewable energy projects. Up to a quarter of the us\$11 billion the company plans to invest in the U.S. this year will go toward offshore wind. Iberdrola is one of the largest owners of onshore wind farms in the U.S. through its controlling stake in Avangrid, a utility and renewables developer with more than 3 million utility customers in New York and New England. Avangrid is joint owner of Vineyard Wind, whose 800-megawatt project for Massachusetts will become one of the largest U.S. offshore wind farms. Vineyard is expected to be finished in 2023. Iberdrola confirms there has been no change in the project timeline despite the coronavirus shutdown. The company also plans to create wind farms off Kitty Hawk in North Carolina and in a second location off the coast of New England.

Iberdrola expects that by the by the late 2020s it will be the leader in floating offshore wind farms, although this technology is still in its early stages of commercial development. Iberdrola recently revealed details of two floating wind farm demonstration projects in Norway and Spain.

ECO-TOYS

Giant toy companies such as Mattel, Hasbro and LEGO have announced big changes to improve their green credentials, and smaller and newer companies are avoiding bad habits altogether by producing environmentally-conscious toys right out of the gate.

Says Tensie Whelan, former head of the Rainforest Alliance and currently director of New York University's Stern Center for Sustainable Business, 90% of toys are made of plastic, posing chemical issues, waste disposal issues and social supply chain issues.

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

Children within Generation Alpha (children born from 2010 to 2025) are expected to be far more eco-conscious than previous generations. A 2019 report from Wunderman Thompson Commerce finds that 63% of this generation would like to work somewhere helping to save the planet when they grow up.

Mattel, the company behind Barbie, Fisher-Price and other popular toy lines, has introduced new product lines including Mega Blocks derived from bio-based resins, as well as a version of the traditional Fisher-Price Rock-A-Stack made of bio-based sugar cane plastic. Mattel says it's making its packaging more environmentally friendly by using 93% recycled materials.

Another giant, LEGO, plans to make 100% of its packaging sustainable by 2025 and it uses plant-based plastic for some products, notably the LEGO Treehouse set. The plastic alternative made of sugar-cane, however, may not be as durable as oil-derived plastic. LEGO also has a goal to make all its LEGO products from sustainable materials by 2030.

Hasbro intends to phase out plastic packaging by 2022 and to reduce its energy consumption by 25%. It also plans to reduce its waste to landfills by 50%, to reduce its greenhouse gas emissions by 20% and to reduce water consumption by 15% by 2025.

Traditional plastic toy companies are trying to green themselves because they know they face competition from upstart toy companies that shun oil-based plastics from their inception and that can advertise themselves to eco-anxious parents as companies that have never sinned – in contrast to traditional toy companies that are, at best, reformed sinners.

COARSE DUST IN THE ATMOSPHERE: MORE THAN WE THOUGHT

UCLA scientists report that there is four times the amount of coarse dust in Earth's atmosphere than is currently simulated by climate models. Their findings appear in the journal *Science Advances*. The researchers found that Earth's atmosphere contains 17 million metric tons of coarse dust – equivalent to 17 million elephants or the mass of every person in the U.S.A. put together.

Knowing precisely how much coarse dust is in the atmosphere is essential for understanding not only the atmospheric phenomena that dust influences, but also the degree to which dust may warm the planet.

There are two types of dust in the atmosphere, both kicked up by high-velocity winds in dry areas. Fine dust tends to cool because it scatters sunlight, much like clouds do. Coarse dust, which is larger in size and originates in places like the Sahara Desert, tends to warm the atmosphere, much like greenhouse gases. Coarse dust particles warm the Earth's entire climate system by absorbing both incoming radiation from the sun and outgoing radiation from the Earth's surface. These particles can impact stability and circulation within the atmosphere, which may affect atmospheric phenomena like hurricanes.

The researchers found that coarse dust leaves the atmosphere less quickly than current climate models predict. In the case of the Sahara, air and dust mix in ways that push the dust upward. This can work against gravity to keep the dust in the air much longer.

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

The scientists' findings also show that because dust particles stay in the atmosphere longer, they are deposited further from their source than has been predicted by climate models. Dust from the Sahara, for example, can reach the Caribbean and the United States.

When desert dust ends up in oceans, it may stimulate the productivity of ocean ecosystems and increase the amount of carbon dioxide absorbed by the oceans.

NOMINATIONS: CANADA'S "TOP 30 UNDER 30" SUSTAINABILITY CHAMPIONS

Corporate Knights, a Canadian association representing green, greenish and green-leaning private sector companies, is calling for nominations for its sixth annual "30 under 30" young sustainability champions and leaders. The 30 winners, all under the age of 30, will be announced in the November 6 2020 Issue of Corporate Knights' magazine. Nominations close on June 1. Nominees can be young social entrepreneurs or business leaders, politicians or impactful bureaucrats, up-and-coming scientists or rising activists. People can self-nominate. The nomination form is at <https://www.corporateknights.com/channels/leadership/corporate-knights-30-30-nominations-now-open-15857497/>.

According to Corporate Knights:

"Millennials and Gen Z aren't just demanding more from politicians, they've also been called this decade's corporate watchdogs, demanding that companies demonstrate a higher purpose beyond profit. Deloitte's 2019 survey of over 13,000 millennials in 42 countries found that 42% have increased their support for businesses they believe are having positive impacts on society and the environment, while 38% have withdrawn their support for companies they see as having a negative impact... One 2019 survey conducted by Swytch found nearly 40% of millennials have accepted one job offer over another because of a company's sustainability. Another 30% have left a company due to its lack thereof."

A WAVE OF FLOW BATTERIES?

University of California (USC) scientists have developed a battery that may solve the electricity storage problem that has constrained widespread use of renewable energy. The technology is a variation on a known design that stores electricity in solutions – a negative solution and a positive solution – and that uses a membrane to allow electrons to pass from one solution to another, generating electricity. Power can be stored in one solution, to be released through the membrane when power is needed. These so-called redox flow batteries have existed for a while, but the USC researchers have built a better version based on low-cost and readily available materials. Up to now, redox batteries have used vanadium, which is expensive and toxic.

The key innovation of the USC scientists involves using different fluids: an iron sulfate solution and a type of acid. Iron sulfate – a waste product of the mining industry – is plentiful and inexpensive. The acid – anthraquinone disulfonic acid (AQDS) – is an organic material derived from coal tar and it is already used in some redox flow batteries for its stability, solubility and energy storage potential.

It's the first time they've been combined to prove potential for large-scale energy storage. Tests at the USC lab prove the battery has big advantages over competitors in terms of low cost and reduced toxicity.

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

PUT WARNING LABELS ON GAS PUMPS, SAY HEALTH EXPERTS

In a March 31 letter to the *British Medical Journal* entitled ***We need health warning labels on points of sale of fossil fuels***, five doctors and international public health leaders propose that warning labels be placed on gas pumps pointing out the health and environmental hazards of the use of gasoline. They suggest this should be done first of all in high income nations that have contributed disproportionately to greenhouse gas emissions, and in other developing countries whose emerging economies are experiencing a rapid rise in greenhouse gas emissions. They say the labels should highlight the health effects of fossil fuel use because there is evidence that messages about the climate emergency framed around health are more persuasive than environmentally framed messages.

Some jurisdictions already intend to require these labels, says the letter:

“In Sweden, eco-labels will be mandatory from this May. The labels will show ‘climate impact’, the raw materials used for the fuel, and their origin. They are part of a package to reduce fossil fuel use, including tax on new high emission cars and subsidy for low emission ones, but without direct reference to health. In contrast, Cambridge, Massachusetts voted in January to make information about the environmental and human health impact of fossil fuel use mandatory on all self-service fuel pumps.”

The letter writers draw on the world’s experience with tobacco warnings to make their case:

“Since 1969, increasing numbers of countries have required cigarette packets to carry health warnings. One hundred and eighteen countries now require cigarette packets to include graphic pictures alongside stark health warnings. These warnings can change attitudes and behaviour, providing a critical contribution to effective tobacco control policy. Smoking is no longer viewed as a normal lifestyle choice, but as an addiction which harms the individual and those around them through exposure to second-hand smoke. Fossil fuel use also harms others through ambient air pollution that accounts for about 3.5 million premature deaths per year, as well as through climate change, which increasingly threatens the health of current and future generations.”

The writers also tackle the issue – debated often among climate activists – of the respective roles of individuals and of governments in tackling global heating (roles sometimes expressed as *either/or* when they should be *and/and*):

“Although individual action alone is insufficient to achieve the aims of the Paris Agreement, it is critical. Governments should take urgent, decisive steps to raise awareness of personal choices that reduce greenhouse gas emissions as well as implementing national policies to decarbonise the economy. Individual exposures to the proposed warning labels will be most frequent for those who use most fossil fuels, thus having a potentially larger impact on those individuals who are disproportionately contributing to the climate emergency.”

The writers also cite a Canadian example of an egregious unintended consequence that can result from warning labels:

“Implementing warnings will face challenges. For example, in North Vancouver, Canada, pictorial designs denoting biodiversity loss were ‘co-opted’ by the Canadian fuel industry and incorporated into a national ‘Smart Fueling’ initiative, with any threats to health omitted.”

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

Sadly, Ontario has gone in a direction opposite to health warnings on gas pumps, requiring instead that gas pumps in the province display government-provided stickers opposing the carbon tax that is meant to reduce carbon emissions.

Beloved Editor's Note: The *British Medical Journal* has compiled a number of editorials, research reports, policy analyses and opinion pieces into a collection of resources related to the connection between health and climate change. Entitled ***Health in the Anthropocene***, the compilation can be accessed at <https://www.bmj.com/anthropocene>.

NATURE GREEN IN TOOTH AND CLAW

We do not own.
We owe.

For these millennia
We've tried to bind the Beast
To make of it a caged and dancing bear
While we declare we are its guardians.

We take bits of its innards
To exhibit them
In zoos and arboreta.

We inhale the aromatic reek of its decay,
We eat the flesh and frond of it,
Congratulate ourselves
For naming it and taming it,
Declaiming we are fond of it.

Riven,
It gives, it is not given.

Yet in the fox-heart of the forest
In the vastwards of the springbok's plains
In the curlew's cry across its clouds
In the gyres of kelp-full krill-rich oceans
Greenblood voices
Follow us, hollow us –

"You do not own.
You owe."

John Butler

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

OUR READERS KNOW A THING OR TWO

A dear reader, responding to an article in the last issue of *The Village Green* entitled **Health, Pandemics and Climate Change**, provides historical perspective:

"Climate change' is a US Republican term (motivated by the fossil fuel industry) proposed as a propaganda substitute response (which has obviously caught on) to the original term of global warming, which clearly pointed to carbon.

Our present predicament [the pandemic] stems not from carbon – the article implies it could play a role and does in other diseases – but from the wet markets in China where animal abuse is rampant. Wild (and domestic) animals are crowded together in small cages hosed down and handled and sold. The wild animals are considered free and ours for the taking (and of course the domestic ones are already 'ours'). In fact this is just another situation wherein the wild is ours for our profit and – oops – our loss, not to mention the animals themselves. So COVID-19 is not directly related to global warming, but it certainly is related to our attitude to other – especially non-human – lives."

IN My HUMBLE OPINION: TRUMP W.H.O. FUNDING CUTS KILL PEOPLE

Your Beloved Editor tries to be a gentle commentator. Sometimes gentle won't do.

The Trump administration has put a hold on U.S. contributions to the World Health Organization. There is evidence that Trump wants to eliminate U.S. contributions to the W.H.O. entirely.

His administration has now defined the United States as a barbaric nation. It is a nation whose official policy sinks it into muscular and uncaring arrogance that smacks more of retrograde tribalism than of compassionate world partnership to reduce suffering. Individual Americans are often compassionate and global but that won't matter to people whose wounds are caused or inflamed by American policy. The U.S. is a nation that proclaims itself the world's leader, that expects respect and even love, but that continues to submerge the world in the filth and injustice it generates to support the American Way of Life.

The U.S. is withdrawing its support from a flawed but essential global organization just as the pandemic curve has started to skyrocket in parts of the world ill-equipped to deal with mass misery. It is likely that many more folks will die because of the withdrawal of the U.S. from W.H.O. funding. It is likely that many more people will be weakened individually and socially, leaving them ill equipped to survive the surges of catastrophe that climate change will create.

Wrote *New York Times* opinion columnist Nicholas Kristof on April 15:

"Thousands of Americans would be alive today if President Trump had spent more time listening to the World Health Organization instead of trying to destroy it. I've seen the WHO's work around the world, saving children's lives from pneumonia, or women's lives in childbirth. And let me be blunt: If Trump goes through with his announcement that he will cut off American funding for the WHO, more children and moms will die around the world."

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

The U.S. Treasury Department has decided that President Trump's signature will be on each federal pandemic recovery cheque sent to Americans. It would be more fitting if henceforth, every nation producing pandemic death certificates entered on each certificate: **Contributing Cause of Death: Donald J. Trump et al.**

One hyper-powered narcissist cannot create this degree of arrogant destruction alone. He needs helpers – people who go to work every day to implement policies that kill other human beings.

For each Alpha Destroyer like Trump and henchmen Pence, Barr and Pompeo there are a thousand people whose bureaucratized and routine daily labor abets the destruction. They are the people who German Jewish philosopher Hannah Arendt would describe as purveyors of the banality of evil. They are the people poet W. H. Auden spoke of in his 1948 poem ***The Managers***:

**“The last word on whether we may live or die
Rests today with such quiet
Men, working too hard in rooms that are too big,
Reducing to figures
What is the matter, what is to be done...
Far into the night
Their windows burn brightly
And, behind their backs bent over some report,
On every quarter,
Forever like a god or a disease...
No; no one is really sorry for their
Heavy gait and careworn
Look, nor would they thank you if you said you were.”**

Indeed, there are many Americans passionately opposed to their nation's Alpha Destroyers and to those who serve the destroyers – but apparently not yet enough Americans to stop the travesty and tragedy.

Just as individuals can be the servants of Alpha Destroyers, so can other nations. If nations are afraid to speak up against the American wrecking ball or are willing to condone it for the sake of some other fancied benefit, they are co-conspirators – and short-sighted ones at that. The wrecking ball aimed today at the house next to you may aim tomorrow at your house.

As a tiny cog in a big-wheeled world I've written a cog-letter to our Prime Minister asking our government to augment funding to W.H.O. to help replace what is lost because of an American pullout, and asking our government to bear witness to the importance of sustained funding for the W.H.O. from all nations, including the United States. I'm guessing our Mister T. will drop everything else to deal with a letter from a cog as important as I am.

respectfully submitted to the *Polis*,

John Butler

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

REST IN PEACE, MAJOR TOM

Many of us are witnessing the deaths, from COVID-9, of people we cherish. I lost one of these friends two days ago when Major Tom Tuppenney of the Salvation Army died. I take the liberty of speaking about Tom in a climate newsletter because he taught me something I try to keep in mind every time I write a climate article that attempts to intertwine ethics and action.

Tom was jovial and rotund – a Santa Claus without the beard. Under his joviality and his Sally Ann uniform was the heart of a scrappy rebel – a heart that made itself heard when he sensed mere lip service to a cause, or reverence to power simply because it is power.

Before he retired, Tom was in charge of all Salvation Army addiction programs across Canada. He had at one time been in charge of Salvation Army addiction programs in Detroit, a position that put his high ethical standards in conflict with a corrupt mayor and municipal administration in that city. Tom didn't back down.

He and I co-authored the Salvation Army's addiction treatment manual for Canada. We served together on the board of Addictions Ontario. What started out as a consultant-client relationship became a friendship.

He read works of theology for relaxation. He preached entertainingly and well, always happiest when the congregation comprised people in recovery. He could abide people in power but he gravitated to people without power.

Dr. Samuel Johnson wrote, in mock disdain for John Wesley, the founder of Methodism:

“I hate to meet John Wesley; the dog enchants you with his conversation, and then breaks away to go and visit some old woman.”

Tom was like that. He could hold his own in a conversation with a minister of health, but if he heard about a drunk in a nearby alley, Tom would find his way to the alley and the drunk. There's a good chance the drunk would then find his way to love, acceptance and treatment.

Tom and I spent many an extended lunch in a fish and chip shop on Laird Avenue in Toronto, solving the problems of the Salvation Army and moving on to the problems of the universe. I sat by his bedside as he recovered from the amputation of his foot because of diabetes. He sat by my phone-side as I recovered from cancer surgery. He prayed for us and laughed with us.

This is what he taught me. **Be sure that the things you say and the actions you take in the public square are rooted in an ethical framework. And be sure that ethical frameworks move you from mere speculation to real-world action.**

If Tom's view of the afterlife is true, he's now in all probability leading a quality improvement session for angels.

Good on you, friend Tom.

THE VILLAGE GREEN

Number Twenty-two, April 19, 2020

SHE SAID / HE SAID

"You don't need a scientific background or inclination to be part of the climate movement or conversation. This is not about science; it's about justice. The science proves the severity of the injustice, sure, but it's not the entire story. There's a place for everyone in the climate movement because everyone, even the smallest toddler, understands the concept of 'no fair.'"

Mary Annaïse Heglar, writer-in-residence, Columbia University Earth Institute

"The goal of transit, right now, is neither competing for riders nor providing a social service for those in need. It is helping prevent the collapse of civilization. What's more, transit has always been doing that. Those 'essential service' workers, who are overwhelmingly low-income, have always been there, moving around quietly in our transit systems, keeping our cities functioning. Too often, we have patronized them by calling them needy or dependent when in fact everything would collapse if they couldn't get to work."

Jarrett Walker, *In a Pandemic, We're All 'Transit Dependent'*, CityLab, April 7, 2020

"I would like to stay home to try to stop the disease from spreading, but who will put food on the table? What does a person like me do?"

Paulo Roberto Nunes, 52 year old peanut seller, Rio de Janeiro

"Everybody is going to electric vehicles. Some of this could get delayed, but it's not going to change the trend."

Ellen Hughes-Cromwick, former chief economist at the U.S. Department of Commerce and the Ford Motor Company

"Kids all over the world have to pay for mistakes we didn't even make. This is our future, we're the next elders. This is our future."

Autumn Peltier, youth climate and water activist, Wikwemikong First Nation, Manitoulin Island

**baby mice in their nest
squeak in response
to the young sparrows**

Matsuo Bashō (1644-1694)

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