Dear Reader,

I decided to come back to Facebook and try an experiment. I started a Groundswell News Journal group. I’m thrilled that as of today, we are 53 strong. My desire is to write some of my daily lifestyle thoughts and actions and share them with you. I’m pretty good at this stuff as I’ve been living it and teaching it for decades. I don’t think like everyone. I hope you enjoy my messages and I hope you’ll join us.

I apologize for not being skilled at answering people individually but I am very grateful for all comments and hope this will turn into a vibrant exchange of thoughts and actions among my friends.

Sometimes when I’m super busy working on the Journal or doing my part-time job or visiting with my family, I may not get back to you quickly and trust you’ll understand that I’m doing the best that I can.

I have heard from many old friends and that delights me. It’s been a rough year but things are getting better now. Part of me wants to curl up with some new spiritual books I’ve ordered and be a hermit and the other part needs to feel the love and support I get from around the world.

My passion is trying to find nurturing, inspiring stories. I love the ones you send me best of all, though I don’t always place them up front because sometimes I feel that the global articles are what all our readers need to see. Then, as they flip through the pages, your wonderful local stories appear and hopefully inspire others to take similar actions to the ones you are taking.

Stay well, stay calm. stay peaceful, stay informed, and above all stay active

Love,

Iona

By Jessica Corbett
Common Dreams: January 10, 2020

“Today’s business as usual is turning into a crime against humanity.”

As climate groups launched a new campaign targeting Wall Street’s funding of the dirty energy industry and school strikers took part in weekly #FridaysForFuture protests across the globe, Swedish teenager Greta Thunberg and 20 fellow youth activists published an op-ed calling on world leaders to “abandon the fossil fuel economy.”

Business and government leaders will come together in Davos, Switzerland later this month for the 50th anniversary of the World Economic Forum. This year’s theme is “Stakeholders for a Cohesive and Sustainable World.” Thunberg and her co-authors explain in the Guardian that, “Young climate activists and school strikers from around the world will be present to put pressure on these leaders.”

“We demand that at this year’s forum, participants from all companies, banks, institutions, and governments immediately halt all investments in fossil fuel exploration and extraction, immediately end all fossil fuel subsidies, and immediately and completely divest from fossil fuels,” the op-ed declares.

“We don’t want these things done by 2050, 2030, or even 2021, we want this done now – as in right now.”

The youth activists point out that despite the “climate and environmental emergency,” banks have collectively poured at least $1.9 trillion into the fossil fuel industry since global governments adopted the Paris climate agreement in December 2015, according to an analysis from the Rainforest Action Network and other advocacy groups.

“The world of finance has a responsibility to the planet, the people, and all other species living on it. In fact, it ought to be in every company and stakeholder’s interest to make sure the planet they live on will thrive,” says the op-ed. “But history has not shown the corporate world’s willingness to hold themselves accountable. So it falls on us, the children, to do that.”

Greta continued on page 3
What is the Grassroots Coalition for Environmental and Economic Justice?

Founder/Editor: Iona Conner
Wire Editor: Allen Hengst
Established: September 2013
Web site: www.gobackclub.org
Contact: Grassroots Coalition, c/o Iona Conner, 2170 Route 88, Brick, New Jersey 08724; 814-515-3809; groundswellnews@pa.net
Contributors: Fr. Ted Cassidy, Michael Mann, Rolly Montpelier, Paul Tamale, Judy Wanchin

Mission of Our Newspaper
The mission of Groundswell News is to be a beautiful, inspiring, uplifting journal which educates and enlightens people about climate change through scientific articles and stories by and about activists who are working to protect life on Earth and preserve natural resources.

What is the Grassroots Coalition?
John and Iona Conner started this nonprofit 501(c)(3) organization in 1990. The mission was and remains “dedicated to creating the critical mass of active participants needed to bring ecological justice to this Earth by providing information and resources to individuals which encourage and assist them to make lifestyle changes beneficial to the environment and to effectively grapple with local and global environmental concerns.”

Who are we trying to attract?
We hope to reach people who are concerned about global warming and realize that they are part of the problem but don’t know what to do. We invite them to sign up for our newspaper. Please tell your family and friends about us. They can go to www.gobackclub.org to learn more.

What are we trying to achieve?
We want to rapidly increase the number of serious climate activists in the world and inspire them through stories from other activists. Our goal is to keep their spirits up, their energy strong, their hearts open, and their eyes bright and alive.

Our Values
This journal is based on love for Earth, all people, all forms of life – plus air, clouds, rain, snow, weather, oceans, forests, etc. We love Nature. We respect everyone and are willing to share our experiences, both good and bad, with others who may profit from them. We are a global family.

Guidelines for Submissions
I do not get directly involved in fundraising. To submit a story, you need to write a regular article about your work and submit it in a Word document with 2 or 3 photos, including captions and photo credits and then email it to me at groundswellnews@pa.net. If you need funding, mention that in your last paragraph and be sure to give your contact information.

Since Groundswell News is a climate change activist newspaper, please be sure to mention how your work connects with fighting global warming somewhere. I can’t promise when or if your story will be published. Don’t worry too much about punctuation or spelling since I proofread everything, just give me the history, heart and soul, dreams, and current project description plus your contact information at the end. I’ll be eager to see what you submit.

Thanks so much.

Fair Use Law: https://copyright.gov/fair-use/more-info.html

Fair use is a legal doctrine that promotes freedom of expression by permitting the unlicensed use of copyright-protected works in certain circumstances. Section 107 of the Copyright Act provides the statutory framework for determining whether something is a fair use and identifies certain types of uses—including criticism, comment, news reporting, teaching, scholarship, and research—as examples of activities that may qualify as fair use. Section 107 calls for consideration of the following four factors in evaluating a question of fair use:

(1) Purpose and character of the use, including whether the use is of a commercial nature or is for nonprofit educational purposes: Courts look at how the party claiming fair use is using the copyrighted work and are more likely to find that nonprofit educational and noncommercial uses are fair. This does not mean, however, that all nonprofit educational and noncommercial uses are fair and all commercial uses are not fair; instead, courts will balance the purpose and character of the use against the other factors below. Additionally, “transformative” uses are more likely to be considered fair. Transformative uses are those that add something new, with a further purpose or different character, and do not substitute for the original use of the work.

(2) Nature of the copyrighted work: This factor analyzes the degree to which the work that was used relates to copyright’s purpose of encouraging creative expression. . . .

(3) Amount and substantiality of the portion used in relation to the copyrighted work as a whole: Under this factor, courts look at both the quantity and quality of the copyrighted material that was used. If the use includes a large portion of the copyrighted work, fair use is less likely to be found; if the use employs only a small amount of copyrighted material, fair use is more likely. . . .

(4) Effect of the use upon the potential market for or value of the copyrighted work: Here, courts review whether, and to what extent, the unlicensed use harms the existing or future market for the copyright owner’s original work. In assessing this factor, courts consider whether the use is hurting the current market for the original work (for example, by displacing sales of the original) and/or whether the use could cause substantial harm if it were to become widespread. . . .

Please note that the Copyright Office is unable to provide specific legal advice to individual members of the public about questions of fair use. See 37 C.F.R. 201.2(a)(3). For further information, see https://www.copyright.gov/fair-use/more-info.html.
“Anything less than immediately ceasing these investments in the fossil fuel industry would be a betrayal of life itself,” the op-ed concludes. “Today’s business as usual is turning into a crime against humanity. We demand that leaders play their part in putting an end to this madness. Our future is at stake, let that be their investment.”

Thunberg’s co-authors are Jean Hinchliffe, Australia; Danielle Ferreira de Assis, Brazil; Joel Enrique Peña Panichine, Chile; Robin Jullian, France; Luisa Neubauer, Germany; Licipriya Kangujam, India; David Wicker, Italy; Julia Haddad, Lebanon; Oladosu Adenike, Nigeria; Iqbal Badruddin, Pakistan; Arshak Makichyan, Russia; Holly Gillibrand, Scotland; Alejandro Martinez, Spain; Isabelle Axelsson, Sweden; Sophia Axelsson, Sweden; Ell Jarl, Sweden; Mina Pohankova, Sweden; Linus Dolder, Switzerland; Vanessa Nakate, Uganda; and Tokata Iron Eyes, the United States.

The op-ed was welcomed as “incredible” and a “barnburner” by adult climate leaders. “Brilliant article by youth strikers from around the world,” tweeted the U.K. grassroots movement Labour for a Green New Deal. “We need to ditch fossil fuels immediately and build a new economy for people and planet. The ruling classes will never do it, so it’s up to us.”

Some organizers of Stop the Money Pipeline – which officially launched at Jane Fonda’s final #FireDrillFriday event on Capitol Hill – noted that the op-ed’s message aligned with theirs. As Common Dreams reported Thursday, the new campaign demands that banks, insurers, and asset managers cut ties with the fossil fuel companies that are wrecking the planet.

Moira Birss, finance campaign director at Amazon Watch, shared Stop the Money Pipeline’s website and the op-ed from youth activists in a series of tweets Friday. Author and activist Bill McKibben, who co-founded the environmental group 350.org, was among a small group of Stop the Money Pipeline organizers arrested Friday for occupying a D.C. branch of JPMorgan Chase, one of the campaign’s top targets. McKibben pointed to the op-ed in a Twitter thread about the Chase action. And in case you’re wondering, the whole world is on the same message this a.m. @ GretaThunberg and the youth climate crew released a remarkable message today.

“The world has two power centers, political and financial,” McKibben said in a statement Friday. “And we have to go after both if we have any hope of slowing down the pace of global heating.”

“Now truly, it is daunting to take on the sort of central pillars of global capital... These people are huge and strong and powerful,” McKibben said on the most recent Fire Drill Friday teach-in, which was livestreamed on Facebook Thursday night. “On the other hand,” he added, “if we can get them to begin to bend, the effects will be rapid and global because all the money in the world is concentrated in a few places.”

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Nevertheless, They Persisted:

How one small town in Pennsylvania is successfully fighting the fracked gas industry.

Submitted by Judy Wanchisn,
Pennsylvania USA
with the following message:

Something to add to your Christmas reading... I just couldn’t resist... I think Aaron did a great job capturing our story in Grant Township and the Hellbenders part in it. An excerpt...

"For Wanchisn, the years-long effort is proof of the power of persistence. ‘I don’t think they expected us to fight this long,’ she says. ‘In that [June 2014 township] meeting, I think they expected to scare the hell out of us.’"

"The way Long sees it, Grant Township’s case is important because it could be an inspiring example to other communities trying to stop similar oil and gas projects. “Our victory would be yours,” she says. “We're not just doing this to shut this down in Grant Township.”"

Jon Perry (now township chairman) adds,

“We’ve never wavered in our thoughts about this. The idea was to keep the injection well out and protect our constituents’ water – and that’s still the way it is.”

True enough. Today, there is still no fracking wastewater injection well in Grant Township, Pennsylvania.”

Judy, Queenmother of the Hellbenders

By Aaron Skirboll
Sierra: December 17, 2019

JUNE 3, 2014. Looking back, many residents of Grant Township, Pennsylvania, believe that was the day their fight against the state’s powerful fracking industry began – the point at which they started to assert their sovereignty over the lands and waters of their woodland community. That was when the battle lines were drawn in a contest that would come to dominate town affairs for years to come.

It was the first Tuesday of the month, the day of the routinely scheduled township meeting. Normally, the meetings are scarcely attended, quiet, and uncontentious, focused mostly on agenda items like replacing stop signs and repairing potholes. But on that hot spring night, the room was packed; every seat was filled, so people lined the back wall and poured out the entrance into the small parking lot.

The three elected township supervisors and a secretary sat facing the crowd. Near the front sat three out-of-town attorneys, their formal attire contrasting sharply with the denim wear of the town officials and residents. “I can still remember their navy blue suits and their polished brown shoes,” says Judy Wanchisn, who has lived in the area nearly all of her 76 years.

The suits were there representing Pennsylvania General Energy (PGE), an

Persistence continued on next page
independent oil and gas firm with wells throughout the greater Appalachian Basin. Earlier that spring – after what some local residents considered a pro forma process – the EPA had given the company permission to convert an existing gas well into a Class II-D wastewater injection well. Once completed, the well would insert as much as 30,000 barrels’ worth of fracking wastewater 7,500 feet into the earth every month indefinitely. Thirteen hours a day, seven days a week, large trucks would descend on the rural town to deposit fracking wastewater from across the state.

Many Grant Township residents were not opposed to energy extraction, as evidenced by the conventional gas wells that dotted the landscape. But the wastewater well seemed like something entirely different – and more worrisome. There is no municipal water system in the township; each household relies on its own private well for water. Many people feared that the wastewater injections could poison their local aquifer, making their homes unlivable.

The Grant Township residents were now contemplating a radical move to protect their groundwater: a Community Bill of Rights that would ban such disposal wells within their jurisdiction. The proposed ordinance, however, would go far beyond the single matter of the injection well. The Community Bill of Rights would also seek to establish the township’s right to self-government (“All power is inherent in the people,” the ordinance text read) while recognizing that, “All residents of Grant Township, along with natural communities and ecosystems within the Township, possess the right to clean air, water, and soil.”

Emotions were electric in the crowded, stuffy room as the discussion of the Community Bill of Rights began. Fred Carlson, one of the elected supervisors, addressed the PGE attorneys directly. “The only reason I can see that you gentlemen are here is that Grant Township is a very small township, ” he said. “That’s the reason we’re being picked on. . . . And we don’t want to be the suckers to hold all of this type of water.”

The suits did little to dispel Carlson’s feeling that his community was being bullied. “If it goes to court – and I don’t want to saber-rattle here – there’s a possibility the township could be required to pay our attorney fees if you lose, and you don’t want that to happen,” one of the corporate lawyers said.

For nearly an hour, the Grant Township residents aired their concerns about the proposed well. If it leaked – as other such wells located around the country had – it could jeopardize their groundwater. The regular deliveries of wastewater would involve a surge of heavy truck traffic in a community that doesn’t have a single stoplight.

Despite their promises not to saber-rattle, the corporate lawyers threatened legal action if the Community Bill of Rights was approved. “You will get sued, and you will lose,” a PGE attorney said.

Carlson turned to his neighbors and asked for a show of hands from those in favor of the Community Bill of Rights. Palms were raised around the room; the vote was nearly unanimous. Carlson eyed the attorneys. “Our ordinance is passed, ” he said. “You boys know where we’re at. If there’s a problem, go at it.”

Wanchisn’s daughter, Stacy Long, a graphic designer who was an ordinary constituent on that night (now she’s an elected township supervisor), remembers the feeling of opposition and community spirit. “Everybody was just like, ‘Sue us? What are you going to do? Take away garbage day? ’” she says. “We are in a cinder
block building in the middle of nowhere. What do you think you're going to take from us?"

At the same time, there was a presentation that the vote in favor of the Community Bill of Rights was just the beginning of what promised to be a long storm. On that night, resident Bill Woodcock was sitting next to Carlson's wife, Sue. Woodcock remembers that she turned to him and said, "Well, now we're in for it."

GRANT TOWNSHIP IS LOCATED in west-central Pennsylvania, about an hour-and-a-half drive from Pittsburgh. The township is 27 square miles of rolling hills, green fields, and woodlots of eastern hardwood forest. "Nature at its finest" is how Woodcock describes the area. "This is a very quiet and peaceful place to live."

Little Mahoning Creek, a popular fly-fishing spot for brook trout and home to the rare eastern hellbender salamander, weaves through the landscape. In the late 18th century, a village on the Mahoning was a trading post used by the Senecas and English and French trappers. The creek's name was originally Mo-hul-buc-ti-ton, meaning "where we abandoned our canoes."

According to the most recent census, a scant 741 people reside in Grant Township, almost all of them white. In the 2016 election, Donald Trump carried Indiana County — home of the township and the birthplace of Jimmy Stewart — by a two-to-one margin. Locals who have been involved in the long-running campaign against the PGE wastewater injection well say that the issue transcends partisan politics; opposition to the disposal well isn't anything more than common sense. "There's no public water here," says Jon Perry, Woodcock's spouse, who today is the township chairman. "If these people lose their water, their homes are worthless, their land is worthless."

What had started as just one small town versus one midsize gas company was now a fight between the waters of west-central Pennsylvania and the state's entire oil and gas industry.

The first unconventional gas well employing hydraulic fracturing techniques was drilled in Pennsylvania in 2004, marking the start of the fracking boom in the Marcellus Shale, the oil-and-gas-rich geologic formation that stretches from New York to Ohio. The novel extraction method was accompanied by a serious side effect: the millions of gallons of wastewater produced by each gas well. Initially, the gas industry sent the toxic water to municipal sewage-treatment plants.

The EPA eventually banned the practice because of the heavy metals, chemicals, and other contaminants entering public water systems. In one incident, in 2008, the drinking water for nearly 350,000 people in communities along the Monongahela River near Pittsburgh was contaminated, an episode the EPA deemed, "One of the largest failures in U.S. history to supply clean drinking water to the public."

For many years, the Pennsylvania frackers sent the wastewater to injection wells in Ohio. Eventually, the fracking companies began looking for wells in Pennsylvania, closer to the shale fields. "Pennsylvania wasn't prepared," says John Quigley, who served as the secretary of the Pennsylvania Department of Environmental Protection (DEP) from 2015 to 2016 and before that headed the state's Department of Conservation and Natural Resources. "Pennsylvania has been playing catch-up from the get-go with this industry. Developments in the industry always far outpace the state government's ability to respond, understand, and regulate."

Even as the fracking industry was booming, a series of budget cuts were undermining the state's ability to oversee the new gas wells. In 2003, the DEP had an annual budget of about $245 million; a decade later, the DEP budget was $125 million. In the midst of a "sharply increased demand for services," Quigley says, "Pennsylvania and the DEP do not have the resources to do their job."

When PGE proposed the wastewater injection well, DEP officials told the Grant Township supervisors that there was nothing to worry about. But the locals had reasons for mistrust: They had heard about fracking-related earthquakes in Ohio and Oklahoma. For Wanchisn and many other locals, the biggest fear was contaminated groundwater. "You don't shit where you eat or drink," she recalls thinking when she first learned about the wastewater-well proposal.

Before the injection-well proposal,
Wanchisn, whose family has roots in the area going back to the late 19th century and owns 315 acres, had been settling into a quiet retirement after a long career as an elementary school teacher. "I was enjoying my life, always gardening," says Wanchisn, who speaks with equal parts passion and patience, a trait honed during her years as an educator. "I went out with my friends. I was very active. And then this thing happened. And it was just hell. Awful."

Wanchisn’s life of tending her flowers and doting on her grandchildren quickly transformed into the life of an activist. She began studying case law, the technicalities of Class II injection wells, and the so-called Halliburton loophole, a provision in a 2005 federal energy bill that allowed fracking companies to bypass the Safe Drinking Water Act. With Stacy Long and her husband, Mark, and Bill Woodcock, Wanchisn formed the East Run Hellbenders Society, a nonprofit environmental group (named after the local salamander) focused on assisting the township supervisors with stopping PGE’s injection well.

The group soon made contact with the Community Environmental Legal Defense Fund (CELDF), a small public interest group that for close to 25 years had been working with communities across the country to pass radical self-governance and rights-of-nature ordinances. The Hellbenders wanted help in drafting an appeal to the permits the fracking company had been granted by the EPA. The staff at the defense fund had different ideas.

Chad Nicholson, an organizer with CELDF, remembers that his first encounter with Wanchisn was “a tough conversation.” Nicholson told her that his organization believed it was a waste of time to try to prevent the wastewater well through the usual regulatory and legal challenges. “It’s been 20 to 30 years of losing in the traditional appeal way,” he told her.

“It was kind of the epiphany moment for [CELDF], in the late ‘90s and early 2000s, of seeing things over and over again just getting dumped on communities against their will, and at that point communities were asking the very simple question, ‘Why can’t we just say no to this stuff?’” Nicholson says by way of explaining CELDF’s theory of change. “There were literally people pulling out their copies of the Pennsylvania Constitution, citing Article 1, Section 2: ‘All power is inherent in the people.’ So why is it that people don’t seem to be making any decisions that are meaningfully affecting the future of their communities?” (While some grassroots activists applaud CELDF for its aspiration to be, in its words, a “resistance movement focused on driving rights for local self-determination and nature into the highest levels of law,” the organization has faced criticism even among environmentalists for its controversial strategies and tactics, which can leave communities exposed to significant liability.)

Nicholson explained the different routes available: Do nothing and let the well happen, proceed with the usual environmental appeals, or just say, “No, we’re not going to accept this.” Nicholson said that if the township pursued the third option, CELDF would help draft a local ordinance that would simply outlaw the injection well.

Wanchisn was sold. She took the idea to the township supervisors, telling them, “I think this is the only way it’s going to work.” Under CELDF’s guidance, the Grant Township supervisors drafted the Community Bill of Rights ordinance that was approved that steamy June night in 2014.

“Y es, [we’re being] sued by the protection agency for having the audacity to try to protect the water system of the town. ” Just as it had threatened, the gas-extraction company took the township to court.

**Perspective continued from previous page**

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“Yes, [we’re being] sued by the protection agency for having the audacity to try to protect the water system of the town.” Just as it had threatened, the gas-extraction company took the township to court.

**Perspective continued on next page**
Three months after the Community Bill of Rights was passed, PGE filed a lawsuit in federal court charging that the ordinance infringed on the company’s “constitutional and state law rights.” The suit claimed that, “Grant Township intended to deny corporations, such as PGE, their legal and long-standing Constitutional rights, including, but not limited to, their rights under the First, the Fifth, and the Fourteenth Amendments and the Contract Clause of the United States Constitution.”

The Pennsylvania Independent Oil and Gas Association, an influential industry lobbying group, soon filed a motion to intervene on PGE’s behalf. In response, the East Run Hellbenders filed their own motion to intervene on the township’s behalf. In the spirit of the rights-of-nature provisions of the town’s new ordinance, the Hellbenders filed their motion jointly with Little Mahoning Creek itself.

The battle lines over the wastewater well had been dramatically redefined. What had started as just one small town versus one midsize gas company was now a fight between the waters of west-central Pennsylvania and the state’s entire oil and gas industry.

THE PGE ATTORNEY who, during the tense June 2014 town meeting predicted that his company would sue and that Grant Township would lose the case was, in a way, prescient. In October 2015, a federal magistrate, Susan P. Baxter, struck down the town’s ban on wastewater disposal and ruled that the Hellbenders and the creek couldn’t be parties to the suit, since their interests were already represented by the township (though the judge made no ruling on whether the watershed had its own legal rights). “Although the defendant wishes it were not so,” Baxter wrote, “the development of oil and gas (which necessarily includes the management of waste materials generated at a well site) is a legitimate business activity and land use within Pennsylvania.”

That might have been the end of the story. But the Grant Township residents, led by the Hellbenders, decided to fight on. In fact, they had already been planning to. While the township’s attorneys filed a federal court appeal to try to reverse Baxter’s decision, the township supervisors, with CELDF’s support, laid out a strategy to establish Grant Township as a “home rule” municipality and assert its self-governance under state law.

Pennsylvania law contains a provision that allows the residents of the state’s towns and counties to vote to govern themselves with significant latitude. In Pennsylvania, the concept of home rule goes all the way back to the commonwealth’s founding by William Penn and was originally intended to ensure that the state government wouldn’t override local rights. Some 70 jurisdictions in the state – including Philadelphia and Pittsburgh – enjoy home rule, which allows a community to pass whatever laws it likes, with the exception of those that condone activities explicitly prohibited by state government. Pennsylvania maintains the ability to overrule a municipal law if the government believes that law infringes on the state’s power.

The community decided to craft an especially broad home rule charter, one that would not only assert its self-governance but also – in a repeat of the Community Bill of Rights – outlaw wastewater injection wells and recognize the rights of area ecosystems. Section 104 of the Grant Township home rule charter reads, “All residents of Grant Township, along with natural communities and ecosystems within the Township, possess the right to clean air, water, and soil, which shall

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Persistence continued on next page
Groundswell News #59, February 2020: Page 9

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include the right to be free from activities which may pose potential risks to clean air, water, and soil within the Township, including the depositing of waste from oil and gas extraction.

The supervisors, with help from the Hellbenders, began campaigning throughout the community to build public support for the new charter. “This is about saving ourselves, saving our water,” Long would preach to friends and neighbors. “Asserting our right to say to the state and federal government that we have a right to say ‘No’ to a polluting company.”

On November 3, 2015, the township residents voted on the ballot measure. The final tally had the local citizens approving the home rule charter by a two-to-one margin. At the same time, Long was elected as a township supervisor, as was Perry. Wanchisn proudly heralds the measure as, “The first rights-based charter in the United States.” Woodcock points out, “This is something that was due process, put to a vote, and democratically adopted.”

Though it was politically ambitious, the home rule charter also served the narrower purpose of buying Grant Township residents some time. In the fall of 2014, just as the federal case was beginning to wend its way through the court system, the DEP issued a permit for the wastewater well. But then Long and Wanchisn asked the agency to look into whether the injection well conformed to the state’s Clean Streams Law and raised questions about the risk of injection-related earthquakes – forcing the DEP to take the unprecedented step of revoking the permit.

Meanwhile, federal magistrate Baxter addressed Grant Township’s new charter, writing, “The Home Rule Charter is not before this Court. If a litigant wishes to challenge the provisions of Grant Township’s Home Rule Charter, it must do so through a separate lawsuit.” As the calendar flipped over to 2017, the fate of the proposed well remained in legal limbo.

Then, in March 2017, the DEP took the offensive. The agency reapproved the PGE wastewater well in Grant Township along with a second well in Highland Township. The DEP also filed a pair of lawsuits against the two townships, arguing that their home rule charters illegally obstructed the state’s existing policies, including Pennsylvania’s 2012 Oil and Gas Act. (In 2016, voters in Highland Township had approved a home rule charter very similar to Grant Township’s.)

Grant Township soon filed a counter-suit, claiming that it had no choice but to prohibit the injection well since, in the township’s view, the state environmental protection agency had failed in its duty to safeguard the area’s natural resources. In an 18-point declaration filed with the court as part of the countersuit, Perry wrote, “DEP has failed . . . egregiously in its public trustee duties regarding the regulation of the oil and gas industry.”

“Yes,” Perry says, with incredulous sarcasm unmistakable in his voice, “[We’re being] sued by the protection agency for having the audacity to try to protect the water system of the town.”

IN OCTOBER 2019 – more than five years after the Grant Township residents began their campaign to stop the wastewater well – a three-judge Pennsylvania Commonwealth Court panel in Pittsburgh heard arguments in the case between the DEP and the township. For its part, the state argued that, “If Grant wishes to attempt prohibiting oil and gas waste fluid disposal within the township, it must use only lawful mechanisms in this effort, and it did not do so in this case.”

The township responded that its home rule charter is perfectly legal under Pennsylvania’s Environmental Rights Amendment (ERA), passed in 1971, which declares, “The people have a right to clean air, pure water.” The township further argued that the “DEP has failed, and continues to fail, to protect and advance these rights, and has therefore violated its public trustee duties to the people under Article I of the Pennsylvania Constitution.”

“We’re asking the court to deny [the DEP’s] motion so we can proceed to actually talking about our constitutional claims,” says Grant Township attorney Karen Hoffman. “This case is the first time there has been a home rule municipality, or charter, that is enforcing the rights under the ERA. So, it’s a novel issue for the court.” (As of press time, the court had yet to issue a ruling.)

Many of the Hellbenders had traveled to Pittsburgh for the proceedings; Long was there, along with her mother and Woodcock and Perry. The battle against this one wastewater project had involved unforeseen challenges. Earlier in 2019, a U.S. federal court had ordered Grant Township to pay $103,000 in attorney fees accrued by PGE (Grant’s total yearly budget is $140,000; the judgment is currently in mediation). Yet the Hellbenders expressed no regrets.

For Wanchisn, the years-long effort is proof of the power of persistence. “I don’t think they expected us to fight this long,” she says. “In that [June 2014 township meeting, I think they expected us to fight this long, ” she says. “We’re not just doing this to shut this hell out of us.” The way Long sees it, Grant Township’s case is important because it could be an inspiring example to other communities trying to stop similar oil and gas projects. “Our victory would be yours,” she says. “We’re not just doing this to shut this down in Grant Township.”

Perry adds, “We’ve never waivered in our thoughts about this. The idea was to keep the injection well out and protect our constituents’ water – and that’s still the way it is.”

True enough. Today, there is still no fracking wastewater injection well in Grant Township, Pennsylvania.

This article appeared in the January/February 2020 edition of Sierra with the headline “Nevertheless, They Persisted.”

Source: https://www.sierraclub.org/sierra/2020-1-january-february/feature/nevertheless-they-persisted-grant-township-pennsylvania-fracking

NOTHING GIVES YOU MORE JOY THAN WHEN YOUR HEART GROWS WIDER AND WIDER AND YOUR SENSE OF BELONGING TO THE UNIVERSE GROWS DEEPER AND DEEPER.

- Br. David Steindl-Rast -

https://www.pinterest.com/pin/678636237584500606/
Fracking: Fallacy, Fiction, and Falsehoods

By Jared Stonesifer
PennFuture: December 5, 2019

Note from the Editor: When I see words like "fallacy, fiction, falsehoods, and misinformation, I tend to equate them with "lies."

This is the second in an ongoing series of blogs taking a deeper look at the comments, misinformation, hyperbole, and criticisms from the natural gas and petrochemical industry as well as their allies in their attempt to sell Pennsylvanians on the virtues of its climate-killing sector.

As we’ve seen in other states, the industry often uses misinformation tactics to sow doubt, build political support, and put a wedge in public debate. These blogs will provide an easily digestible point/counterpoint to some of the most prominent statements, quotes, and attacks. The first blog in the series can be found at https://www.pennfuture.org/Blog-Item-Fallacy-Fiction-and-Falsehoods.

Introduction and Context

Pittsburgh Mayor Bill Peduto ignited a firestorm in late October when he voiced opposition to further expansion of the petrochemical industry in western Pennsylvania. The mayor’s stance kicked off a heated debate that has unfolded between local and state politicians, business leaders, and citizens about the future, not just of western Pennsylvania but the entire state.

The debate reached as far as Gov. Tom Wolf, who sided with Allegheny County Executive Rich Fitzgerald in supporting the industry and its expansion. A letter signed by 20 regional elected officials circulated in support of the industry, while one state representative petitioned ExxonMobil to scout his district for a potential ethane cracker plant.

These letters, press releases, and public statements continue to make assertions that are misleading and serve only as industry talking points to further the goal of turning Pennsylvania into the next petrochemical hub.

Myth: The petrochemical industry is Pennsylvania’s "lifeline to the future." In a letter signed by more than 20 regional elected officials – including Allegheny County Executive Rich Fitzgerald and 16 county commissioners from western Pennsylvania – it was stated that the fracked gas industry has "breathed life back into our communities" and that the petrochemical industry is our "lifeline to the future."

Fact: The petrochemical industry, even if built to capacity, will have a negligible impact on regional employment. Shell’s cracker plant in Beaver County is expected to employ roughly 500 people once the plant is operational, meaning jobs at the cracker plant will represent less than 1 percent of the county’s workforce of more than 81,000 people.

Myth: The oil and gas industry often uses misinformation tactics to sow doubt, build political support, and put a wedge in public debate.

Myths continued on next page
Candy-colored Darter Saved From Logging in the South

Email from Center for Biological Diversity

After opposition by the Center for Biological Diversity and allies, the U.S. Forest Service announced it’s nixing a massive logging project in a West Virginia national forest over concern for the endangered candy darter. We’ve been helping defend this tiny fish – named for its colorful breeding-season stripes – since a petition in 2010 that, followed by a lawsuit, finally won Endangered Species Act protection for the species.

Here is an excerpt from "Forest Service cancels Mon logging project to protect endangered fish" in the Charleston Gazette-Mail by Rick Steelhammer in the December 29th issue.

A 2,400 acre logging project in the Monongahela National Forest has been canceled over habitat concerns for the candy darter, a small, colorful non-game fish granted protection under the Endangered Species Act.

The Big Rock Project, located in the Cranberry River watershed of Nicholas and Webster counties, called for a series of timber sales designed to thin hardwood stands, create early succession forest habitat, and open wildlife clearings.

A number of small clear cuts, totaling about 1,300 acres, would have been created to make possible new stands of early succession habitat, while about 700 acres would have been thinned and had timber removed by trucks. More than 400 additional acres of timber targeted for thinning on steeper, less accessible slopes would have been removed by helicopter. The project had been under review since 2014.

Since the candy darter was first scientifically described in 1932, 35 populations have been discovered in fast-moving, rocky-bottomed creeks and rivers in West Virginia and in several of Virginia’s New River tributary streams. Follow-up surveys have shown that the fish no longer exists in nearly half of the sites it previously populated. Only 5 of the candy darters’ 18 remaining known populations are considered to be healthy and thriving. . . .

Source: https://www.wvgazettemail.com/news/energy_and_environment/forest-service-cancels-mon-logging-project-to-protect-endangered-fish/article_b8cca00e-5aea-5fd3-aeb0-23a2576ad0b5.html/
Email received January 11, 2019

**Dear Lovely Avaazers,**

*Note: This email isn’t a campaign, but 90% of Avaazers polled voted to send it…*

For over a decade, Avaaz has fought and won battles to change laws, policies, and politics. We’ve won huge victories.

But it hasn’t been enough.

Because the truth is, there’s something more powerful than laws and policies. Us. The culture, values, and beliefs of people. And while we were trying to change policies, anger and fear and Facebook and the Kremlin have been changing people, changing us.

A great struggle for the soul of humanity is being waged – between hope and despair, trust and distrust, truth and falsehood, fear and love, tribalism and unity, wisdom and what would seem like wisdom. And it’s going on in each of us and all of us.

The shock troops on one side of this struggle are well known: the trolls. Whether it’s the result of the wounds of shame and hardship they experience, or simple cash payment, they are spreading social poison at an industrial scale.

But it’s not Us vs Them. Because who is on the other side? All of us. And that’s where Avaaz comes in.

Trolls and the trolliness in all of us have taken so much from us – our social networks, much of our media, and politics, even many personal and family relationships.

It’s heartbreaking. But let’s make the 2020s the decade we took it all back.

And let’s begin where we must – with ourselves – with a set of principles that we might commit to follow, online and offline, to manage our own inner trolls and show the world a different way forward. (These have also been polled and strongly supported by Avaaz members.)

If these principles speak to you, sign on and share reflections with others at https://secure.avaaz.org/campaign/en/2020_principles_loc/. Let’s support and inspire each other to get better at them. Sometimes just a small number of people behaving a certain way can help catalyze a much broader shift. Avaaz might be such a catalyst.

Imagine a world where most of us agreed to follow principles like these and succeeded much of the time. We might still disagree on many things, but the character of that disagreement might be different. Less petty and vicious and tragic, more meaningful, perhaps respectful. Humanity would still be beautifully diverse, and sometimes clashing. But we’d be more noble at the same time.

Maybe, more of what we’re meant to be.

And maybe that’s the gift of the trolls among us and within us, and even the ones that lead us. We can look at them and say – that’s just not who we are, who we want to be. And then listen for that quiet voice within, to usher us onward to who we are meant to be, for ourselves, and all of us.

With hope and love,

**Ricken and the whole Avaaz team**

Avaaz is a 55-million-person global campaign network that works to ensure that the views and values of the world’s people shape global decision-making. (“Avaaz” means “voice” or “song” in many languages.) Avaaz members live in every nation of the world; our team is spread across 18 countries on 6 continents and operates in 17 languages.

Learn about some of Avaaz’s biggest campaigns at Facebook, Twitter, or Instagram. To contact Avaaz, write to us at https://www.avaaz.org/en/contact/?footer or call us at +1-888-922-8229 (U.S.).

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**CHANGE THE STORY AND YOU CHANGE PERCEPTION; CHANGE PERCEPTION AND YOU CHANGE THE WORLD.**

- Jean Houston -

I am a climate scientist on holiday in the Blue Mountains, watching climate change in action.

After years studying the climate, my work has brought me to Sydney where I’m studying the linkages between climate change and extreme weather events.

Prior to beginning my sabbatical stay in Sydney, I took the opportunity this holiday season to vacation in Australia with my family. We went to see the Great Barrier Reef – one of the great wonders of this planet – while we still can. Subject to the twin assaults of warming-caused bleaching and ocean acidification, it will be gone in a matter of decades in the absence of a dramatic reduction in global carbon emissions.

We also travelled to the Blue Mountains, another of Australia’s natural wonders, known for its lush temperate rainforests, majestic cliffs, and rock formations and panoramic vistas that challenge any the world has to offer. It too is now threatened by climate change.

I witnessed this firsthand.

I did not see vast expanses of rainforest framed by distant blue-tinged mountain ranges. Instead I looked out into smoke-filled valleys, with only the faintest ghosts of distant ridges and peaks in the background. The iconic blue tint (which derives from a haze formed from “terpenes” emitted by the Eucalyptus trees that are so plentiful here) was replaced by a brown haze. The blue sky, too, had been replaced by that brown haze.

The locals, whom I found to be friendly and outgoing, would volunteer that they have never seen anything like this before. Some even uttered the words “climate change” without any prompting.

The songs of Peter Garrett and Midnight Oil I first enjoyed decades ago have taken on a whole new meaning for me now. They seem disturbingly prescient in light of what we are witnessing unfold in Australia.

The brown skies I observed in the Blue Mountains this week are a product of human-caused climate change. Take record heat, combine it with unprecedented drought in already dry regions and you get unprecedented bushfires like the ones engulfing the Blue Mountains and spreading across the continent. It’s not complicated.

The warming of our planet – and the changes in climate associated with it – are due to the fossil fuels we’re burning: oil, whether at midnight or any other hour of the day, natural gas, and the biggest culprit of all, coal. That’s not complicated either.

When we mine for coal, like the controversial planned Adani coalmine, which would more than double Australia’s coal-based carbon emissions, we are literally mining away at our blue skies. The Adani coalmine could rightly be renamed the Blue Sky mine.

In Australia, beds are burning. So are entire towns, irreplaceable forests and endangered and precious animal species such as the koala.

The continent of Australia is figuratively – and in some sense literally – on fire.

Yet the prime minister, Scott Morrison, appears remarkably indifferent to the climate emergency Australia is suffering through, having chosen to vacation in Hawaii as Australians are left to contend with...
LONDON, UK – Swiss scientists have done something many of their colleagues had claimed was impossible: they have linked the random events of the daily weather change we all experience directly to the climate crisis.

It has been an axiom of climate science for decades that – although global heating would inevitably increase the likelihood of more intense or more damaging windstorms, floods, droughts, or heat waves – it would not be possible to say that this or that event could not have happened the way it did without the ominous rise in global average temperature, driven by profligate use of fossil fuels.

But that no longer holds, according to a new study in the journal *Nature Climate Change*. “Weather, when considered globally, is now in uncharted territory,” researchers write. “On the basis of a single day of globally observed temperature and moisture, we detect the fingerprint of externally driven climate change, and conclude that the Earth as a whole is warming.”

Climate scientists and statisticians from the Swiss Federal Institute of Technology, known simply as ETH Zurich, and from a partner institute in Lausanne known as EPFL, say that the seemingly normal variations in daily weather around the world are telling a clear story – just as long as the observers look at the global picture as well as the local measurements.

**Clear Pattern:** For instance, on the same day as the Swiss study, the UK Met Office announced a set of new temperature records for Britain in the last decade. The coldest March day ever recorded was in Gwent, Wales, in March 2018, when the thermometer fell to minus 4.7°C (about minus 20°F). But during the same decade the rest of Britain experienced four new and unprecedented monthly high temperatures, including an as yet unverified high of 18.7°C (about 66°F) late in December.

In January 2020, a village in Norway registered a high of 19°C (about 66°F) a whole 25 degrees above the average for the winter month. But whereas local temperatures can fluctuate wildly, the variation in global average data is very small.

The Swiss scientists combed through the daily mean temperature and rainfall and snowfall data for the years 1951 to 1980, and for 2009 to 2018. They drew bell-shaped curves for each sequence of the years and then tried to match them. Without any overall rise in average global temperatures, the two curves would cover much the same space on the graph paper. They barely overlapped.

They then used a range of sophisticated statistical techniques to make detailed sense of the information in the two patterns of decadal weather. Beyond the jargon of the statistician’s trade – the paper talks of regression coefficients and regularized linear regression models, mean squared errors and Pearson correlations – a clear pattern emerged.

The often-wild swings of natural variation could be disentangled from the intensification powered by global heating. Climate change could be detected from global weather in any single year, month, or even day. No longer can climate researchers use the old escape clause, “Climate is what you expect, weather is what you get,” to explain away seeming seasonal inconsistencies.

Global heating driven by greenhouse gases released by human economic growth is now shaping the world’s daily weather, from the catastrophic heat extremes and wildfires in Australia to the uncharacteristic winter weather in Moscow.

“The fingerprint of climate change is detected from any single day in the observed global record since early 2012,” the scientists write, “and since 1999 on the basis of a year of data. Detection is robust even when ignoring the long-term global warming trend.”

**Source:** https://climatenewsnetwork.net/global-heating-drives-daily-weather-change/

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Australia continued from previous page

unprecedented heat and bushfires.

Morrison has shown himself to be beholden to coal interests and his administration is considered to have conspired with a small number of petro-states to sabotage the recent UN climate conference in Madrid (“COP25”), seen as a last ditch effort to keep planetary warming below a level (1.5°C) considered by many to constitute “dangerous” planetary warming.

But Australians need only wake up in the morning, turn on the television, read the newspaper, or look out the window to see what is increasingly obvious to many – for Australia, dangerous climate change is already here. It’s simply a matter of how much worse we’re willing to allow it to get.

Australia is experiencing a climate emergency. It is literally burning. It needs leadership that is able to recognize that and act. And it needs voters to hold politicians accountable at the ballot box.

Australians must vote out fossil-fuelled politicians who have chosen to be part of the problem and vote in climate champions who are willing to solve it.

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**Source:** https://www.theguardian.com/commentisfree/2020/jan/02/australia-your-country-is-burning-dangerous-climate-change-is-here-with-you-now
The strongest message on Climate in 2019 did not come from the IPCC (Intergovernmental Panel on Climate Change). Nor did it come from climate scientists, or world leaders, or the Pope, or the United Nations. It came from 17-year old Greta Thunberg, Time Magazine’s Person of the Year for getting the world’s attention on the climate threat.

The Bright Star Shining on the Climate Movement

In the 17 months since Greta Thunberg began her climate strikes (August 2018), she has easily become the most influential climate leader on the planet. She has met with heads of state, addressed world leaders at the United Nations, the World Economic Forum, governments of several countries – the United Kingdom, Ireland, The EU Parliament, the U.S Congress – and inspired millions to join the largest climate demonstration ever on September 20, 2019. Thunberg is synonymous with “climate strike” which was declared Word of the Year by Collins Dictionary. Her impact on the climate movement is immeasurable.

David Roberts (writing in Vox) zeroes in on the primary reason for Greta’s success and appeal. “Thunberg has sidestepped attacks on her motives by almost entirely refraining from endorsing specific political reforms or policies,” writes Roberts. Greta simply says, “I can’t really speak up about things like [politics]…no one would take me seriously.”

I want you to listen to the science.

Greta wants world leaders to follow the science. Her insistence on this point was illustrated when she submitted the IPCC’s report on limiting warming to 1.5 degrees Celsius in lieu of testifying to the U.S. Congress. Attached was a short letter that said, "I am submitting this report as my testimony because I don’t want you to listen to me. I want you to listen to the scientists. And I want you to unite behind the science. And then I want you to take action.” Greta does not allow her actions to take center stage. She insists that science, not politics, must lead climate policy.

In Intelligencer, David Wallace-Wells writes about Greta’s “extraordinary rise… and her Hail Mary climate movement.” He points out that she’s “the Joan of Arc of climate change, commanding a global army of teenage activists numbering in the millions and waging a rhetorical war against her elders through the unapologetic use of generational shame.”

Greta’s language is impassioned, hot, direct, and raw.

The following Greta quotes have come to dominate the post-hope climate era we are now living in.

You only speak of green eternal economic growth because you are too scared of being unpopular. You only talk about moving forward with the same bad ideas that got us into this mess, even when the only sensible thing to do is pull the emergency brake. You are not mature enough to tell it like it is. Even that burden you leave to us children…Our civilization is being sacrificed for the opportunity of a very small number of people to continue making enormous amounts of money. — COP 24 climate conference in Poland

The year 2078, I will celebrate my 75th birthday. If I have children, maybe they will spend that day with me. Maybe they will ask me about you. Maybe they will ask why you didn’t do anything while there still was time to act. You say you love your children above all else, and yet you are stealing their future in front of their very eyes. — COP 24 climate conference in Poland

Adults keep saying we owe it to the young people to give them hope. But I...
A rare firefly found in only a few spots along a beach area frequented by central Pennsylvanian vacationers will move forward in consideration for Endangered Species Act protection, according to the U.S. Fish and Wildlife Service (USFWS).

The agency recently announced its intentions for the Bethany Beach firefly and Gulf Coast solitary bee – coastal species, the former East Coast and the latter Gulf Coast, threatened by climate-driven sea-level rise, unchecked development and more – in response to petitions filed by the Center for Biological Diversity and the Xerces Society.

It’s the first time that a firefly in the U.S. will be considered for Endangered Species Act protection.

The Bethany Beach firefly has been documented at only seven sites along the Delaware coast. Each of the sites is smaller than a football field. The wetland area that is home to the firefly’s largest remaining population is being developed.

In its petition, the Center urged that protecting the firefly is warranted due to ongoing threats, including wetland conversion and light pollution.

Like the bee, the Bethany Beach firefly is also threatened by the failure of state and regional regulatory mechanisms to protect the insects adequately, according to the Center.

The lightning bug, identifiable through its unique, green, double, tail blink, had not been found recently along the Delaware coast until a team from Delaware State University went looking for it in the late 1990s and found it in seven interdunal swales, which are wetlands near dunes that are fed by groundwater and rainwater.

“Protection for this firefly can’t come soon enough,” said Candace Fallon, petition coauthor and senior conservation biologist at the Xerces Society. “We’re on the brink of losing a unique piece of Delaware’s heritage.”

She noted that the Bethany Beach firefly has nearly disappeared from three of its seven remaining sites. Six of the firefly’s seven remaining populations are in state parks, but only a single firefly was found at two of those sites during the most recently published survey.

In its petition, the Center urged that the USFWS decision is, “Great news for these two imperiled insects, but we can’t prevent their extinction without actually giving them the emergency-room protection that only the Endangered Species Act can offer,” said Tara Cornelisse, a scientist at the Center and lead author of the petitions. “We’re losing insects across the globe, and our rapidly declining fireflies and native bees desperately need our help right now… In a time when they need all the help we can give, protecting imperiled insects under the Endangered Species Act is vital. Unless the firefly and bee are protected, they’ll become victims of the perfect storm of climate change, pesticides, and poorly planned coastal development.”

According to the Center, protecting insects under the act is an important piece of saving the world’s insects from what is increasingly understood as an insect apocalypse caused by habitat loss, pesticides, climate change, and other threats.

Recent evidence shows that more than 40 percent of insect species could be facing extinction.

The Gulf Coast solitary bee appears as close to the edge as the Bethany Beach firefly. It was discovered by scientists in 1993, when it was found only in 15 locations from the coast of Mississippi to near Panama City, Florida. In 2012, when the last Florida-wide count was conducted, only 47 individuals were documented at just six sites.

It might gain protection because of the loss of its single host plant, the Coastal Plain honeycomb head.

Following up on its decision, the USFWS will initiate a scientific status review and public comment period before making a final decision on whether to protect the firefly and native bee.

The Center for Biological Diversity is a national, nonprofit conservation organization with more than 1.6 million members and online activists dedicated to the protection of endangered species and wild places.

The Xerces Society is a nonprofit, science-based organization that protects the natural world by conserving invertebrates and their habitat.

SOIL AS A NATURAL SYSTEM FOR CLIMATE CHANGE MITIGATION

By Paul Tamale, Uganda

DEFINITION OF TERMS

Soil: Refers to an unconsolidated layer on the earth's surface on which plants grow.

Climate change: Refers to the long-term shift in global or regional climate patterns.

Climate change mitigation: Refers to the efforts to reduce or prevent [release] of greenhouse gasses.

Global warming: Refers to the long-term rise in the average temperatures of the Earth's climate system.

Carbon sink: Refers to the natural reservoir that stores carbon-containing compounds accumulated over an indefinite period of time.

Carbon sequestration: Refers to the long-term capture of carbon dioxide from the atmosphere to mitigate global warming.

INTRODUCTION

Climate change is becoming a global challenge owing to its related effects and their associated impacts on health and the well-being of the environment. Extreme weather events such as drought and floods are reportedly on an increase, melting of ice, shifts in the ecosystem, and cases of cancer are on an increase. Greenhouse gases such as carbon-dioxide, methane, and water vapor are the key causes of climate change.

Soils are the largest natural store for terrestrial carbon as reported by the United Nations' Food and Agriculture Organization (FAO) in 2015; this implies that if well managed, soils can help to reduce greenhouse gas accumulation in the atmosphere through carbon sequestration.

This article is intended to explain how soil can act as a natural system to mitigate climate change based on the recent research literature and my experience in soil science so far. Additionally, aiming at bringing out a clear picture on how the world can enhance carbon sequestration by soil so as to mitigate climate change.

SOIL AS A CARBON SINK

Well-managed soils provide a good store for carbon. This is made possible by the process known as carbon sequestration by which carbon from the atmosphere is absorbed and stored in the soil. This is dependent on the soil texture, structure, temperature, moisture, farming system, and soil management.

Carbon sequestration is aided by a range of biological, chemical, and physical processes occurring naturally. The main purpose of carbon sequestration is to ensure that the captured carbon dioxide is not lost to the atmosphere. However, besides being a carbon sink, soil can be a carbon source depending on the management practices.
Soil continued from previous page

carried out.

For better understanding of how carbon is sequestered and lost, there is need to understand the carbon cycle (Fig. 1) which entails a range of pathways through which carbon is added to and removed from the atmosphere.

Plants use carbon-dioxide from the atmosphere, water from the soil, and sunlight to make their own food in the process of photosynthesis which makes carbon to become part of the plant.

When fed on by animals, carbon is passed along the food chain. Through expiration, carbon dioxide is lost to the atmosphere.

When living organisms die and decay, carbon-dioxide is released both from the decomposers and dead organisms into the soil air spaces and also slow diffusion of carbon in the form of carbon-dioxide into the atmosphere.

At times, the dead organisms that are covered up in the soil for over several decades turn into fossil fuels which are preserved in the soil as carbon stores or burnt by human for energy creation, thereby releasing carbon-dioxide into the atmosphere.

The above processes help us to understand the different pathways through which carbon is added to and removed from the soil, which helps to give an informed decision on how soils can be well managed to maintain the soil carbon pool.

Over the years, the soil carbon pool is reported to decline and projections for the coming years show a more increased decline (Fig 2). Practices that lead a decline in soil carbon pool include slash and burn, over grazing, bush burning, shifting cultivation, deforestation, mono-culture, and so many others which are mainly driven by the need to maximize agricultural production to meet the income and social needs of the increasing population.

CONCLUSION
Soil has a unique importance towards climate change mitigation owing to its ability to sequester carbon. However, there is a decline in the soil carbon pool due to poor management practices. There is, however, an undoubted potential to harness the soil carbon pool through sustainable land management practices.

RECOMMENDATION
A range of sustainable practices can be carried out to maintain the soil carbon pool and also minimize carbon-dioxide release to the atmosphere so as to reduce greenhouse gas accumulation in the atmosphere, thereby mitigating climate change. These practices include among others: mulching, afforestation, terracing, cover cropping, ecological farming, permaculture, and minimum tillage.

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Tamale Paul is a Ugandan bachelor’s degree graduate of Makerere University Kampala. He studied Agricultural Land Use and Management, which mainly focuses on sustainable landuse. He is currently passionate about knowledge-sharing on fields related to soil and sustainable landuse.
The Nature of Racism and How We Conquer It

Come with me as we journey into this new way of thinking. This book is a journey into this newness. This thinking is based on the writing and investigation of Murray Bowen, a psychiatrist and family systems therapist, who studied dysfunctional families. Bowen’s method is ideally suited to help a group see rationally how it is intertwined in a racist system.

Murray Bowen shows how one deals with serious family dysfunction without abandoning the family. His discoveries and theories have had profound influence not only for the family but also for all social systems. His book, Family Therapy in Clinical Practice, first published in 1978, is an edited collection of his writings from 1957 to 1975.

In 1972, Bowen was invited to deliver a paper on specifying predictable human reaction to crisis situations. This paper catapulted him into the area of dealing with the larger systems of society. Initially, his greatest fear was making sweeping generalizations about society because he thought he did not have sufficient data about societal systems. He discovered, however, a missing link that made it possible to bridge the gap between the family and society. The link came from clinical notes concerning his dealing with delinquent teenage children. Bowen discovered that delinquency problems are multigenerational and involve many of the institutions of society – schools, social agencies, police, and courts – and the entire fabric of society that deals with social problems. In 1973 he wrote a paper about the basic concepts of family systems on which the societal process is based. His goal was “to present the concept of the emotional process in society as accurately as possible.”

Racism is an emotional social system. Just as Bowen discovered that delinquency feeds on the social climate, so also does racism. Often in America we hear of claims that racism is operative in certain situations. For example, when Hurricane Katrina hit New Orleans and other parts of the South, the worst natural disaster in United States history, cries of racism were numerous. Many poor blacks were not helped in time to prevent deaths and other horrendous problems. To understand racism one has to grasp the social systems that are infected by racism. Many blacks have not had recourses and environments for good education. Many blacks do not have good jobs, supports, and contacts that whites have. To grasp the nature of racism one needs to look out of the box, not at individual cases of unfair treatment at the time of Hurricane Katrina or other situations, but at how the power and resources of society are being used. New Orleans economic, social, educational, and other resources favor people who benefit from the white culture. Systems thinking honestly looks at this reality.

Bowen had first attempted to apply his family systems theories to society in 1972, in a talk entitled “Cultural Myths and the Realities of Problem Solving.” Although the talk was only marginally successful, it was, for Bowen, an important paper in his career. It helped him build a bridge between emotional process in the family and society.

Bowen demonstrates how systems thinking is different from conventional thinking. In this manual we will use the key dynamics Bowen discovered operating in any social system. He describes some of the numerous relationship patterns in society that parallel family relationships.

Bowen’s theory will help the reader understand the emotional system of racism. Bowen’s method will enable the reader to act as the leader who coaches others to an awareness of how they are a part of racism. By knowing what is happening in the system and by becoming emotionally differentiated enough to deal rationally with the racist system, one is able to assume a leadership role in helping others do the same. One can become free of the emotional ties of racism and thus be objective. Bowen said that his theory, “Provides no magical answers, but it does provide a different way of conceptualizing human problems. It offers a more realistic evaluation of the difficulty in changing the basic patterns in any human dilemma, and it suggests ways to avoid some of the pitfalls of conventional or linear thinking, and to institute progress toward long-term goals.”

Bowen begins by explaining the difference between linear and systems thinking. Systems thinking is based on the functioning in human relationship systems. In a racist society we look at the patterns and not on individuals’ actions. It carefully avoids asking, “Why individu-

Racism continued on next page
Racism continued from previous page

als act from an emotional point of view,” which automatically brings a person back to conventional thinking. On the other hand, conventional thinking diagnoses a patient and prescribes a remedy. Only the circumstances of the individual patient are considered. This individualistic way of thinking is ingrained not only in medicine but also in many of the professional sciences. Systems thinking examines the effects of the systems on a patient.

Edwin Friedman, writing about religious congregations, said that systems thinking identifies a problem in the nature of the system and not primarily in the nature of its parts. He uses the term homeostasis to explain the nature of a system.

A key to the relocation is the concept of homeostasis: the tendency of any set of relationships to strive perpetually, in self-corrective ways, to preserve the organizing principles of its existence. Theories based on the individual model tend to conceptualize the “illness” of a family in terms of the character traits of individual members, and the ways in which their various personal problems mesh. The family model, on the other hand, conceptualizes a system’s problems in terms of an imbalance that must have occurred in the network of its various relationships, no matter what the nature of the individual personalities.

Systems thinking presupposes that, no matter what the condition of an individual, if he or she is part of a system that has a name, the system had to achieve some kind of balance to maintain its identity.

In the case of racism in America every person and every institution is involved in racism, a social system that is endemic to our society.

In any social system there is a strong emotional pull to keep the homeostasis the way it has set itself in place. There is great resistance to change.

However, as we shall see later, if a leader is able to correct himself or herself, the entire system will be led to change.

The next chapter will present an example of what this thinking is all about.

Footnotes:
1 Murray Bowen, Family Therapy in Clinical Practice (NY: Jason Aronson, 1983).
2 Ibid., p. 415.
3 Ibid., p. 416.

The Hurricane of Racism is available for free online at https://www.nacms.org/epubs/special-articles/hurricane-racism or a hard copy of the book can be purchased via Amazon @ https://www.amazon.com/Hurricane-Racism-Ted-Cassidy/dp/0962830976.

Dearest Reader,

Many years ago, I had a free trip to my American friend living in Italy to help her organize her writing. It was a wonderful adventure.

When we needed a break, we would go walking or taking mass transit to interesting places she loved. I’m not a very good photographer but when I snapped this picture, I knew it was a good one. I have wanted to share it with you for a long time and now here it is.

It speaks for itself.

With love,

Iona
Blessed Unrest: Growing a Future for Life on Earth

A conference on the weekend of April 18-19, 2020; Saturday and Sunday 9 a.m. to 5 p.m. Tufts University, Medford, Massachusetts

In 2020 Biodiversity for a Livable Climate will join the world in celebrating the 50th Anniversary of Earth Day. Yet here we are still, now facing exponential decay of the life support systems necessary for continued human presence on this planet. Our most powerful institutions – governments and corporations – are not facing this crisis squarely. On the other hand, thousands of independent organizations and millions of individuals worldwide are restoring living processes in their local areas while connecting with each other to create global change. This is the spontaneous, non-governmental movement that environmentalist and author Paul Hawken has called “blessed unrest.”

In the Spring of 2020 we will present a conference named after a 2007 book by Hawken: Blessed Unrest: How the Largest Social Movement in History Is Restoring Grace, Justice, and Beauty to the World. He describes how this movement “came into being and why nobody saw it coming.” That was over a decade ago, and we see it coming now!

This extraordinary leaderless movement is still largely invisible to the doom-and-gloom mass media – but that hasn’t stopped it from growing in extraordinary ways. Back then these peaceful revolutionaries were relatively isolated in their own corners of the world, many feeling alone but determined. Now, aided by the Internet, we’re all starting to connect, helping and encouraging one another, challenging the terrifying hockey stick of climate disaster by following a new exponential curve of inspiration, hope, and action. Mainstream science is scurrying to catch up.

Our job at Bio4Climate from the beginning has been to demonstrate positive solutions to what seem like intractable problems. And even further, to present Nature as the most powerful force on Earth, and how we must treat her right to benefit all species. Now we are introducing you to some more of the people who are treating Nature and one another well. In all kinds of ways from all kinds of places.

We see this conference as a meeting of participants from a broad array of farmers, urban planners, gardeners, scientists, fishermen, ranchers, activists, and many others who, in Hawken’s words, make up “humanity’s immune response to ecological degradation.”

We’re in the early stages of conference planning and we’ll keep you posted. If you’re not yet receiving our e-mail newsletter, please sign up at the link below. If you have questions, comments, or suggestions, please contact us at staff@bio4climate.org.

Source: http://bio4climate.org/blessed-unrest/
YOU CANNOT GET THROUGH A SINGLE DAY WITHOUT HAVING AN IMPACT ON THE WORLD AROUND YOU. WHAT YOU DO MAKES A DIFFERENCE, AND YOU HAVE TO DECIDE WHAT KIND OF DIFFERENCE YOU WANT TO MAKE.

- Jane Goodall -


Consumer Liberation
Use it up, wear it out, make it do, or do without.

Email Iona at groundswellnews@pa.net and she will put you on our email list to receive monthly issues of our climate activist journal. “Every new one makes us stronger,” sings Pete Seeger.

Groundswell News
Now Accepting Ads

Please consider placing your ad with us. As we are an alternative source of news, we have an alternative ad policy. Send me your material and pay what you feel is reasonable, depending on how much space your ad needs. If your ad requires some of my time to create it for you, there will be an extra charge. If you can afford $50 for half a page and $100 for a full page, that will be wonderful. Our distribution is small now but we hope to grow quickly and our readers are wonderfully supportive people!

Thank you.
I am humbled and privileged to have been able to know you – and your work. Your dedication and passion have been an inspiration to me and the team. Thanks for being a light and hope to the team, together we will be able to build more favorable opportunities for the community and future.

I was super busy as I am in Germany but hopefully, soon I will be back in normal condition :-).

Merry Christmas and a prosperous new decade ahead.

With Gratitude,
Paulin Nithemuka, Rwanda

Well, what can I say? Another wonderful selection of real news by people who think compassionately about how to live their lives!

While every article was informative and many inspiring, I particularly enjoyed reports and photos from our friends in Africa and Asia.

My thanks, too, Iona, for being kind enough to publish my own article.

May 2020 finally bring forth action commensurate with our crisis.

Love to you and all your readers,
Robert Burrowes, Australia

I watched the “Winged Migration” documentary. It is, indeed, beautiful. Sometimes I watch National Geographic documentaries on TV, and this one is in the same vein. These documentaries always leave me in awe. They show the beauty of nature, the amazing variety of life on our planet, and the incredible things that these living things are capable of, be they insects, creatures of the sea, birds, or animals.

I am also always struck by the cinematographic technology they show. It always makes me wonder: How in the world did they do that? Did those guys mount cameras on birds? How else could they show scenes where you feel that you are one of those flying creatures, high above the ground or sea?

Some of those birds are so spectacular. And it is very dramatic how they are threatened by harvesting machines, crumbling glaciers, and predators. As well as by destruction of their habitats!

When I was a child, I used to drift around in the woods and fields outside the small town where I lived. (And do, again.) There is a mountain there – just a rock, actually, sticking up above the surrounding area. From there, one has a nice view of the town and the bay of the Baltic Sea, where the town is located. I used to make a small fire there and grill hot dogs while I enjoyed the scenery.

In summer evenings, I sometimes sat on top of that rock (which I always thought of as “my mountain”) and watched the sunset. I enjoyed the solitude and the feeling of being a part of pristine nature. In the middle of summer, the sun does not set there until 10 o’clock in the evening, and the sunset lasts a long time because it sets at a shallow angle, never staying very far below the northern horizon during the night. I had a feeling of something sacred then, too. The profound silence enhanced the beauty of the sun slowly descending below the trees in the north-west and the colors of the deep gold and orange of the sky.

In 1975 I visited Sweden briefly on my way back to America after 18 months in Japan, and I went back up on “my mountain” and sat there, contemplating the unpredictable turns my life had taken since I used to sit up there as a child. I had learned about the vast timespans during which human had worshiped the sun, knowing that its warm and beneficial rays were what sustained earthly life and chased away the cold and darkness. I then understood that the reverential feelings I had experienced as a child, watching the sun set, were a part of the instinctive nature of humankind.

I was also awed by your Groundswell News Journal. It must take you so much time to put all of that together! I printed it all out. While I haven’t had time to read it all yet, I noticed that you included comments I made in a message to you some time ago. There were many other comments in it, too, from people in different countries. I’m impressed that your Journal has readers all over the world. Thank you for sending it to me.

Best regards.
Anders Eklof, Sweden

Happy New year my Iona.

Thanks so much for your continued good work and especially for all our commitment as a team to make all your dreams and objectives a success. As Mama Solar Africa, I say BRAVO’S and keep up the good work. “Yes,” together we can make a big difference in the whole world environmentally.

Have a blessed new year 2020.

Cheers,
Faustine Lutta Odaba, Mama Solar Africa, NAREWAMA

(second email)

Once again thank you so much for your lovely email to me, you really made my day and New Year beginning so joyful at heart. Kindly accept my sincere thanks and Keep Up the good work.

You are a role model to many. Shine on with Mama Solar Africa. In case you need me to create awareness or something else as concerns energy conservation, Solar Cooking and Fireless Basket Cookers, I am very much looking forward.

Faustine Lutta Odaba, Mama Solar Africa, NAREWAMA

(continued on next page)
Messages continued from previous page

forward to continue to making a difference in the lives of many at grassroots level.

Move on Iona, I am proud of you.

Cheers,
Faustine Lutta Odaba
Mama Solar Africa

(third email)
I trust you have started the year well and working hard as usual.
Thanks for your lovely email and encouraging words.


Once again thanks for your wonderful work and the impact you are creating globally. Be blessed and move on my dear.
Faustine, Mama Solar Africa.

(fourth email)
Thanks for your email too. Be assured you can use my contacts any time you want my sister. I will also send you more about my activities. I know this will create more avenues for me to move on.

Once again thanks. I am so happy at heart and look forward for us moving on to change many people's lives at grassroots level and reduce deforestation.
Thanks and have a blessed week.
Faustine, Mama Solar Africa.

Thanks so much for this splendid communication and seasons greetings. I wish you happy new year mommy.
Amb. Hanson G.Blayon, Liberia

Respected Iona Conner,
Thanks for your email. Very nice to see this report new Journal. Have a happy and prosperous new year ahead.
Best wishes and Regards.
Mohanra Choudhury, India

Nice issue, Iona!
Happy New Year and I hope your holidays were simply wonderful.
Marney Bruce, Maryland USA

I read your email. The recent one. I loved it.
Prince Timmy, Nigeria

Hello President,
You will to act in favor of help for the development can only cause admiration on behalf of the recipient to this noble action that you don't stop bringing everywhere to the poor and vulnerable populations in the world.

We are a non-profit association named Défi et Révolution de la Vie Rurale (DRVR-TOGO) created in October 2005 and her receipt of registration under the number 0676/MATDCL-SG-DLPAP-DOCA and published to the official newspaper of the Republic Togolese.

Our association promotes Social, health sector, agriculture, economic development and education for poverty people and vulnerable communities especially women and children in our country.

Since her création, the DRVR-TOGO association works to the side of the poor communities with actions programmed in documents of projects every year.
- Project of hold and support of the schooling of the orphan and resourceless children;
- Project of equipment in tables benches;
- Maintenance project and of construction of the school building;
- Project of celebration of the feast of Noel to the orphan resourceless children;
- Project of right and health of reproduction of the girls and women;
- Project of the kind and the maternal and infantile health;
- Project of raising and responsibility economic of the women;
- Project of sewing machines to the young tailors and seamstresses at the end of formation;
- Project of production and transformation and merchandising of cassava;
- Project of drinking water for vulnerable populations in the villages in lack of water.

We are in search of organizations, foundations, associations, donrs, non profit societies or companies, religious, and others for a collaboration, of sharing of experiences and projects, to participate shops of formations and backing of capacities of our members and groups targets and so possible to sustain technically and financially our projects to can helped and come with our communities for food and economic self sufficiency and to be able to come out of misery and poverty for a world without hunger, livable, and to answer the objectives of lasting development.

However, we wanted collaboration in the future with your organization to be able to acquire some knowledge and to be capable to face the stakes and problems of our communities.

I am interested very much to working with your organization, what to do?
Please, our official language is French, the all documents projects are in French language again.

In the waiting of a favorable continuation, received my Dear Friends, our distin-
guished greeting.
Best regards,
AKOUETE Yawo Galé
President association DRVR-TOGO;
170.BP: 65 Vogan, Togo
Tel: +228 97149010 (WhatsApp);
Facebook page: Association Drvr-
TOGO.

E-mail: simonakouete@gmail.com
recepisse.jpg

Warm greetings from all of us at the Nexus Exchange (http://thenexusltd.co.uk/).
So beautiful to hear from you in the new decade. I hope you are keeping well regardless of all life's challenges and the opposition against our work in saving our environment.

I am excited to inform you that we now have an Africa Regional Headquarters in Lagos Nigeria and it's absolutely beautiful and a testament to our work with young people all around the world. Please kindly see updates on http://thenexusltd.co.uk/mr-kennedy-centre-nexus-embassy-nexus-exchange-africa-hq/ and feel free to publish this progress in your journal if that's okay with you. I am happy as always to furnish you with any additional information you may need.

Please kindly find attached our updated corporate profile and see our current projects and our vision 2020+.

Sending peace and love from my girls and all of us at the Nexus Exchange.
PS. God blessed my wife and I with a gorgeous little princess in September and I have attached a family portrait as well.
Kind regards and speak soon!
Mr. Kennedy Kwuelum
Founder/CEO Nexus Exchange, Ltd.
Diasporan Coordinator of Commonwealth Alliance of Young Entrepreneurs-West Africa
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(second email)
Yes, Timmy (see earlier email from Prince Timmy in Nigeria) has been our artist apprentice for about 18 months now and have grown so much. His art work is featured in our on-going ArtXhibition (Art Exhibition) with the theme: Broken Earth and all of us at the Nexus Exchange.

Exhibition) with the theme: Broken Earth and all of us at the Nexus Exchange.

Sending peace and love from my girls and all of us at the Nexus Exchange.
PS. God blessed my wife and I with a gorgeous little princess in September and I have attached a family portrait as well.
Kind regards and speak soon!
Mr. Kennedy Kwuelum
This beautiful baby girl’s name is Adanna, which means “Daddy’s girl” or “daughter of her father” and the spiritual meaning is “daughter of the most high God.” Her happy parents are Kennedy and Gina Kuelum. The photographer is Alison Greenwood, Gina’s mother and Adanna’s grandmother.