



Biodiversity for a Livable Climate

Restoring Ecosystems to Reverse Global Warming

February-March 2022 Newsletter

Dear Friend,

I hope this newsletter finds you well!

I am currently reveling in the feeling of a renewed sense of health. I recently came down with a tenacious infection, and spent several days unable to function normally. At one point, the pain got so bad that I simply couldn't walk any further on the way back from the bathroom; I sank to the floor and cried in the middle of the kitchen. As my body went through flashes of extreme hot and then chilling cold, I came closer to feelings of despair than I ever had before in my life. I kept thinking about how this must be the way



Mother Earth feels as climate change overtakes her: unable to control the storms and temperature changes moving through her body.

Through all of this experience, my partner was by my side. When I could go no further, he sat on the kitchen floor with me, offering his shoulder to lean on and a strong hand to squeeze as tightly as I needed to. He even woke up with me every four hours during the night to make sure I took my medicine. He did everything he could to help me get better.

As I began to recover from the infection, I found myself reflecting on this great act of care that my partner showed to me. I wondered if I was showing the same unrelenting care towards Mother Earth.

There is no such thing as perfect environmentalism, and it is impossible to walk this Earth without making an impact on it. However, as Dr. Jane Goodall says, "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." Now that I am recovering and feeling reenergized after the infection, I am also pausing to reevaluate how I go about my days as an inhabitant of this planet. Am I acting with kindness, and am I making decisions and taking actions in daily life that will have the most positive impact?

There is always room for improvement, and this experience gave me reason to rethink my actions. Perhaps this letter might serve as a reminder to pause and reflect: how do you act with care in your corner of the world?

With love,
Abby

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Upcoming Events:

- Fred Jennings' [Spring Courses Preview Session](#) on Monday, March 28th at 12 pm ET
 - Life Saves the Planet GBH Forum Network Talk: [Introducing the EcoRestoration Alliance](#) March 28, 6 pm ET
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Announcements

Have you heard the news? The January 2022 edition of our [Compendium of Scientific and Practical Findings Supporting Eco-Restoration to Address Global Warming](#) was recently released! Our summaries of scientific articles in the Compendium will help you learn the facts about climate without having to read countless research studies cover to cover. (Unless you want to—we include the links and citations!)

This tenth edition of the *Compendium* features articles on two themes: the ecological roles of animals and the cooling function of ecosystems. Keep scrolling to read a featured article from the *Compendium* in this newsletter, and explore the publication here: [January 2022 Compendium](#).



Call To Action: Stop The Deadly Railway

Ecologist Douglas Zook shared this urgent petition with us. Please sign to oppose a railway project that would disrupt Indigenous lands and biodiversity. The iconic Amazon rainforest, our climate, and the local communities need your help.
<https://buff.ly/3HNtA4M>

You can learn more about the railway project, and why it is problematic, here: [Fast track to disaster? Brazil's Grain Train plan raises fears for Amazon](#)

Introducing the EcoRestoration Alliance

Monday, March 28 at 6:00 pm EST

Please join us for this special presentation in our *Life Saves the Planet* lecture series with GBH Forum Network featuring the EcoRestoration Alliance, which grew out of the work of Biodiversity for a Livable Climate. The Alliance is a rapidly growing global collaboration of scientists, thought leaders, conservationists, on-the-ground restoration practitioners and storytellers whose work challenges the prevailing view that, at this late date, we can get the global cooling we need by simply reducing fossil fuel use. The Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) tells us that the path forward is for the work of restoring biodiversity and healthy ecosystems to receive the full attention it has never had.

The panel will focus on the global grassroots-level movement that is doing this work. Alliance members Jon Schull, John Dennis Liu, Ilse Köhler-Rollefson, and Valer Clark believe that ecosystem restoration can be done in a way that supports and empowers local communities. Healthy ecosystems—like forests, grasslands, wetlands, and regenerative farmlands with year-round cover crops—cool the biosphere and tame extreme weather. The panel will explain how this alliance is working to achieve this communal, social, and ecological restoration on a broad scale.

The talk will be recorded and made available online through GBH Forum Network. [Register for free here.](#)

Bio4Climate Spring 2022 Course Offerings

Biodiversity for a Livable Climate is delighted to introduce two new courses, taught by our Ecological Economist, Fred Jennings! Keep reading to learn more and register!

[Social Solutions: Making Systems More Resilient](#)

Mondays and Thursdays, April 4th – June 30th at 12pm ET



To deal with our approaching crises, we need resilient social institutions. This course is aimed at developing a working group of people who are ready to address social problems creatively and intelligently. Dr. Jennings will start with two issues he has already addressed, as a way to develop practical analytical skills in looking at problems and crafting solutions: (1) our failing democratic processes; and (2) our fisheries management systems. We will end with a brainstorming class to identify other issues we might address in a similar, future course.

Learn more and register [here](#).

Horizontal Thinking: Toward a New Economics
Mondays and Thursdays, April 4th – June 30th at 1pm ET

Horizontal Thinking: Toward a New Economics
with Fred Jennings, April 4th through June 30th, 2022

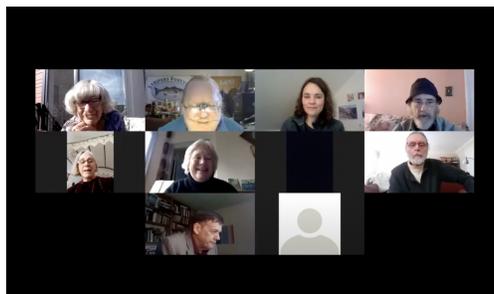


All human-caused ecological losses are—almost by definition—horizontal. With everything we do, we set into motion enduring consequences; the issue is how well we anticipate those effects, in terms of our range of awareness and conscience. This is why any proper ecological economic analysis must incorporate planning horizons as a crucial element of its explanation. In this course Dr. Jennings will outline his unique analysis of a new economics based on horizontal theory, and explain why this sort of analysis should have developed during the last century, had the field not entered what Jennings calls an “Age of Denial ” in 1939, from which it has not yet fully emerged.

Though you will learn a lot of economics during this course, it is not specifically aimed at people knowledgeable in this field. What you should have to enroll in this course is a burning curiosity about why our society has evolved toward the destruction of our ecological life-support systems, and how we might change our economic culture to protect ourselves against this destruction.

Learn more and register [here](#).

[Preview Session – Spring 2022 Ecological Economics Courses](#)



On Monday, March 28 at 12pm ET Fred Jennings will offer prospective students a sneak peek at his spring courses, which both start the following Monday, April 4. Fred will walk people through the roadmaps and aims of these courses and field questions on their content. [Click here to register!](#)

Bio4Climate + Worldwide Teach-In on Climate & Justice

WORLDWIDE CLIMATE JUSTICE TEACH-IN

Bio4Climate is delighted to announce that we are a partner with Bard College's [WorldWide Teach-In on Climate and Justice](#) happening on March 30, 2022. We are joining people in many universities, educational institutions, faith groups, and community programs around the globe to build an interdisciplinary dialogue about climate change and climate justice issues and solutions.

Bio4Climate created a model for the event's organizers called Nature's Solutions; it consists of recorded interviews featuring four speakers who discuss the importance of soil, regenerative agriculture, and giving recognition to the roots of ecological practices, specifically BIPOC (Black, Indigenous and People of Color) traditions. [Click here](#) to explore the recordings, available to the public, on our YouTube channel.

Meet Carol Viana, Co-Founder of the Chloride Free Foundation



New on the Bio4Climate Blog:
[Our Underrated Climate Ally: The Small Water Cycle](#)



Cabezon Peak after rain, Photo by John Fowler (CC BY 2.0)

Our Digital Communications Manager, Tania Roa, recently wrote a blog in partnership with Isabelle Jenniches of the [NM Healthy Soil Working Group](#) on restoring the small water cycle. Here is an excerpt from the post:

You might have heard of ‘the water cycle,’ but there are actually many water cycles. They are in action at all times. Long water cycles draw their moisture primarily from the ocean, while short water cycles – also known as small water cycles – recirculate moisture on land. These cycles release water into the atmosphere through plant water vapor. Once the water reaches the skies, it forms clouds, and the cycle continues as clouds return the water to the land via rain. Evapotranspiration and precipitation are two processes in water cycles that ensure water stays in the respective region long-term.

Without water and its many cycles, our Earth would be hot, far too hot for us to live. The energy from the sun has to go somewhere. It is, after all, aimed directly at the planet. When plants and water are involved, the sun’s energy goes into plants to create life. Without plants or water, that energy gets absorbed by the land and creates ground too hot to walk on, let alone live on. The presence of water and the cycling of it controls local climates. It also provides moisture to plants and forms the clouds that moderate the Earth’s temperatures. The saying “water is life” could not be more accurate.

[Click here](#) to read the full blog post!

Compendium Notes

Below is a passage from our latest issue of the [Compendium of Scientific and Practical Findings Supporting Eco-Restoration to Address Global Warming](#). This article is from our [tenth issue](#), Volume 6 Number 2, (p.12), published January 2021.

Expansion of oil palm and other cash crops causes an increase of the land surface temperature in the Jambi province in Indonesia, Sabajo et al. 2017

Turning lemons into lemonade, Sabajo et al. have used the great expansion of oil palm plantations and other crops in Indonesia to examine how such land-use change affects land surface temperature (LST). The authors observed a warming trend in the Jambi province of Sumatra of 1.05°C and 1.56°C in the morning and afternoon, respectively, between 2000 and 2015. The average morning (10:30 am) temperature increased by 0.07°C per year; the midday afternoon (1:30 pm) temperature increased by 0.13°C per year.

During roughly the same period (2000-2010), forest area decreased in Jambi by 17%, while oil palm and rubber plantations greatly expanded. Given that LST within the province's remaining forests increased only .04C per year at 10:30 am, which the authors attribute mainly to global warming, they concluded that the overall higher province-wide daytime temperature increase was caused by the observed land cover change.

The team also compared temperatures between different land uses: forest, oil palm and rubber plantations, urban areas, and bare land. Despite having a higher albedo (reflectivity) than the forest areas, all converted (non-forest) lands were nonetheless warmer than forests, "suggesting that the albedo was not the dominant variable explaining the LST" [Sabajo 2017: 4629]. Evapotranspiration (ET) played a greater role. Non-vegetated surfaces (urban and bare) were the warmest.

The authors conclude: "The warming effect after forest conversion results from the reduced evaporative cooling, which was identified as the main determinant of regulating the surface temperature" [Sabajo 2017: 4631].

Last But Not Least. . .

You're a valuable part of your community, ecosystem, and planet, and we're so thankful for you. Would you share the love and join our Eco-Restoration Team of Monthly supporters?

Make a Monthly Gift

Make a One-Time Gift

All contributions help in our vital work to build a livable climate that sustains into the future. Many thanks!

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