



## IS CONSERVATION OBSOLETE?

In October, the Intergovernmental Panel on Climate Change (IPCC) released a report on the effects of a global warming of 1.5 degrees Celsius (2.7 degrees Fahrenheit) above the pre-industrial average temperature. That level of warming would likely cause extensive ecological degradation, in the form of increased drought and fire, sea-level rise, the extinction of thousands of species of both plants and animals, and the loss of up to 90% of the world's coral reefs, among other things. The social effects would be just as disastrous: the spread of disease, agricultural decline, storm damage, climate-forced migration, and other factors would injure or kill millions of people. And this is the good scenario — almost impossibly good, since we have already caused a warming of 1° C. Topping out at 1.5° C will likely require cuts in carbon emissions equivalent to 1 billion tons of carbon dioxide (CO<sub>2</sub>) every year over the next decade or so, in a world that is currently pouring over 40 billion tons of CO<sub>2</sub> into the atmosphere every year — and that total is still going up, not down. The IPCC notes that the 1.5° option would require social reforms on a scale for which “there is no documented historic precedent” — and, again, we have about a decade to achieve this miracle.

The remedy for climate change is renewable energy, primarily solar and wind. We have to move in this direction. There aren't any other workable options. “Clean coal” is no more feasible than cold fusion. Natural gas is helpful as a kind of “fossil fuel lite,” but natural gas production releases large amounts of methane, a greenhouse gas many times more potent than CO<sub>2</sub>, although it is shorter-lived. Nuclear is something we're stuck with where we've already got it, but no investor in his right mind would want to sink more money into something that dangerous. So wind and solar are the way to go, but it's a long road ahead. Only about 6% of the world's electricity is currently produced by those two technologies. (The figure commonly cited for renewables overall is 24%, but that is mostly hydropower, and big dams are not ecologically benign.) Renewable substitutes for gasoline and diesel — mainly ethanol and electric cars — account for maybe 4% of the energy expended in the world's transportation sector. (And corn-based ethanol benefits corn growers a lot more than it benefits the atmosphere.)

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## HELP LAUNCH OUR NURSERY EXPANSION FUND!

**Every year**, our Wild Plant Nursery produces thousands of native, wild-propagated trees, shrubs, forbs, and grasses for DC-area parks, schoolyards, and other public landscapes. Help us make it even bigger!

The nursery operates in partnership with the Fairfax County Park Authority, which has allotted more space for us at Franconia Park, in Springfield. We're not yet sure when we'll be able to expand, but we want to be ready to act when the time comes. That's why we're creating a Nursery Expansion Fund now. The nursery already plays a unique role in maintaining our region's green infrastructure. Help us keep our wild areas healthy! See the enclosed reply card.

**The Tree Bank's main nursery could use some help too.** Our Tree Bank program works along the Dominican Republic / Haiti border. Its main nursery is now 12 years old and has weathered hurricanes, earthquakes (no kidding), and a lot of hard use. It needs new shade cloth. Badly. Our colleagues down there have to stitch together all its ragged bits of fabric after every episode of heavy wind. Some of the support posts should also be replaced. We'll probably need \$3,000 to \$5,000 to fix everything up. Want to help? See the enclosed reply card.

**They're at it again! Our two very generous and more-or-less anonymous donors are ready to match you.** As part of our year-end fundraising effort, our benefactors will match the first \$50 of your gift! You give at least \$50, we get at least \$100 — and you can designate the full amount for either of our program areas. See the enclosed card, or give on-line at earthsangha.org. The match runs through January 4<sup>th</sup>. One \$50 match per household.

**Some of our best friends are trees.** We are very pleased to announce that the Earth Sangha was one of seven recipients of the Fairfax County 2018 “Friends of Trees” Environmental Achievement Award. The award was made on October 23 at the Government Center. The County's Design and Environmental Achievement Awards showcase efforts to preserve our local natural heritage and to create built environments that complement that heritage.

**Photo:** In October, native woody-plant seedlings eased into winter in our cold frame. From left to right: pinxterbloom azalea, high-bush blueberry, deerberry, and mountain laurel — all propagated from wild seed collected, with permission, from parks in northern Virginia.



## COSME SAYS: SO FAR, SO GOOD

**C**osme Damián Quezada is Co-Director of our Tree Bank Hispaniola program, which works near the Dominican Republic / Haiti border to improve small-holder farm incomes and conserve forest. We work on the Dominican side of the border because that's where the forests are, but our program area is about 40% Haitian and the Tree Bank is designed to help both peoples. The program has two Dominican Co-Directors: Cosme, and Alfonso "Manolo" Sanchez. I hope to write about Manolo another time.

Both Cosme and Manolo were among our initial group of partner-farmers, when we founded the Tree Bank in June 2006. Since then, Cosme has become one of my closest collaborators. He's a kind of amateur expert on the region's trees; he knows everyone in our community, and he has excellent political skills. I talk to him usually two or three times a week, and I want to introduce him to you. Hence this interview!

But first, a little background. Cosme grew up in Baúl, a little rural municipality that borders Los Cerezos, the municipality where our program is based. He's 52 years old and he still lives in Baúl. He has 14 siblings and half-siblings. Some of them still live nearby; others have left for the cities. Cosme's farming is typical for the region: he owns some cattle and he grows the usual crops — beans, rice, squash, pigeon peas, and so on. He and his wife, Mirian, have two boys and a girl. Cosme left school after the equivalent of 10<sup>th</sup> grade, but Mirian spends a couple of days a week in the city of Santiago de los Caballeros, studying at the Dominican Republic's public university; she hopes to become a primary-school teacher. Cosme has been to Haiti but neither he nor Mirian has ever been off the island.

**Photo:** Cosme in May, 2016. We don't have many good photos of him. He sent us a selfie for this article, but it made his nose look huge.

The interview that follows is from two conversations that I had with Cosme in October. The text is as close to "verbatim" as I can get, but there are several impediments to further movement in that direction. First, Cosme doesn't speak English, so our conversations are always in Spanish. And our exchanges are always full of half-heard utterances — say again? A truck just went by! — as well as false starts, repetition, and irrelevant commentary. Even so, I've done my best to get Cosme's voice into print. [I've also had to include some explanatory asides, in brackets.] I hope to print more of these interviews — and get better at writing them up! Let me know what you think of my efforts thus far. (My questions are in green below.)

**Cosme, when you were a kid, was there more or less forest in the region than today?**

When I was little, there was more. A lot more.

**As you know, our program has two goals. We're trying to help local farmers and we're trying to conserve local forests. How are we doing, in your view?**

So far the project has been good for the whole region. It has advanced the work of the Association a great deal, and that helps the members. [He's talking about our local partner association, the Los Cerezos Forest Producers Association. Farmers' associations are a standard feature of rural Dominican communities.]

It is really helping people a lot, and you can see that if you compare what our Association is doing to the other associations in the region. There isn't any other association in the region that is getting the kind of help that you

are giving us. So there are a lot of people in these other associations who would like to get into our association as well, and that's because of the progress that we're making.

**And these other associations, do they have some form of support, from the government or a foundation?**

No, not usually. Or not much. Around here, the other associations usually can only work on some project for a short time, maybe two years sometimes, and then their supporters go away, and there's no continuation of support. So what usually happens is that the people get started on something but there isn't funding available to maintain it. And then the project is just completely abandoned. The support ends and they can't find other partners so everything just stops. But with us, we're able to keep the maintenance going all the time, and that's why things work better. [By "maintenance" he means chopping competing brush out of the tree plantings, tending coffee and cocoa trees, replacing dead tree seedlings, and so forth.]

**I imagine that the level of activity varies a good deal from one association or project to another.**

Yes, a lot. So for instance the plantings that were done with Solidaridad [Solidaridad Fronteriza is a Dominican border-country NGO] — a lot of those plantings have just been abandoned because people don't have the resources to maintain them. But meanwhile, our projects are going well because we do have that support.

**You mentioned the farmers. What about the forests? Are there forests in the region that would probably not exist any longer if it weren't for our project?**

Yes, that's right. It's true that a lot of forests here have been protected because of the support that you all are giving. A lot. If you look around, we are one of the regions that is doing the most to protect native cover, and that's because of the help that we're getting from you. It's really only the region of Restauración [a little town and

the surrounding area about 8 miles away] and our project region, that are trying to protect native forest.

You're kind of a local expert on native trees. Do you think that the project could help other people learn about the local forests?

Yes, of course. There are other people who are interested.

But there are a lot of people, even in the Association, who don't seem to know much about things like that.

Well of course that true. But there are a lot plants that I myself don't know.

Do you think that, eventually, it would be worthwhile to develop some kind of educational component?

Yes, I think so. We're already trying to orient a lot of people in the community about these issues.

What about coffee and cocoa? Long term, what do you think? Is our investment in forest-friendly crops likely to pay off?

Long term, this should be a big help for the region of Los Cerezos, because these are products that yield for a long time — you get many years from the same trees. But you have to invest in them. You have to know what you're doing. That's why training and education are important. It's not like growing beans or rice, where you only have to think three months ahead.

Finally, how do the local people generally think of the forest? What are their attitudes towards it?

Today, practically everyone considers the forest important. That's because they've seen changes. They've noticed that when there was more forest, there was also more rain and the streams had more water, and the harvests were a little better back then. And the environment was also better — it was cooler.

You think that most of the people in the region think like that?

Pretty well everyone in Los Cerezos does. We know that because so many of these people belong to the Association.

Have people been thinking that way for many years or is this a more recent way of looking at things?

It's more recent. It doesn't go back too many years.

Do you think that people generally consider conservation to be important for the region?

Oh yes, most of them do.

Well, Cosme, let's hope so!

— Chris Bright, President

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*Conservation and Climate Change, continued from the front page . . .*

Very bad news can be seductive. Despair, apathy, the willful failure to comprehend (as in “coal, beautiful coal”) — all of these reactions may come easier than constructive action. But given the enormity of the problem, it's fair to ask: if just one more half-degree Celsius of warming is going to shred what's left of our battered natural areas, is it really worth the effort to try to protect them?

I think that it's more than worth that effort. I see conservation as one of the best investments in our future that we can make. It will pay huge dividends, in an era when we will badly need them. Here are four reasons, briefly stated, for doing more, not less, conservation. (My apologies if the argument seems a bit preemptory; our little newsletter favors brevity!)

**1 Conservation can help solve the problem, at least a little.** In addition to scaling up renewables, we must take two other steps: we must try to keep the Earth's remaining carbon stocks out of the atmosphere, and we must try to draw down at least some of the carbon that is already in the atmosphere. Conservation can help on both of these fronts. Forests contain a lot of carbon, and young forests absorb carbon as they grow, so forest conservation and restoration must be part of the climate agenda. But we do need to be careful not to confuse the restoration of natural forests with tree-plantation development, especially in the tropics. Properly developed plantations are an economic necessity, but monocultures of non-native pine, eucalypt, oil palm, and rubber are not the same thing as forests, and where plantation development is displacing forest, it may actually be releasing more carbon than it absorbs. So *caveat sator*: not all tree-planting is green!

**2 Conservation can improve the odds for threatened species.** Climate change is threatening thousands of plant and animal species by degrading their habitat in various ways. Conservation can reduce this threat by improving the quality of habitat (for instance, by controlling invasive alien species) and by extending habitat (for example, through forest or meadow restoration). These improvements can buy time, and if we can buy enough time, the threat may begin to subside or, in some cases, species may begin to adapt to changing circumstances. This is not a way of escaping those IPCC estimates — it's just that those estimates speak in general terms; they can't tell

us what will happen with a particular stream or mountainside. And the world is made up of particular streams and mountainsides.

**3 Conservation can make landscapes more resilient.** Stable landscapes tend to be continuous, in both space and time. Their streams run year-round, instead of mostly going dry in the summer. Extensive forest or prairie allows wildlife to range through miles of more or less suitable habitat. All that continuity reduces the risk of losing key species — organisms that determine ecosystem structure and function, like the Hispaniolan pine that we are planting in our Tree Bank Hispaniola project area. Continuity also helps stabilize basic ecosystem processes, like the low-temperature ground fires that shape certain plant communities. Conservation can help maintain all this continuity. We can plant tree corridors between forest fragments; we can restore riparian vegetation along streams; and we can reestablish key species where they have been lost. These efforts won't make landscapes impervious to climate change, but they will probably make it easier for natural communities to rearrange themselves in response to climate stresses.

**4 Conservation is something that we owe to the Earth — and to ourselves.** Like all major environmental problems, climate change is not wholly reducible to personal choice. It must also be understood on a social level, and not just as the aggregate effect of millions of individual decisions about what kind of car to buy, and so on. But even so, this is our mess and we owe some sort of remedy to the people who are being hurt by it, and to the millions of other creatures with whom we share this planet. I see climate change as a part of our karmic burden, and I think it's unhealthy to deny the weight of that burden. Better to acknowledge it. Better to choose the way we live, rather than having life just sort of thrust on us, while we struggle with circumstances that we never really welcomed in the first place. Conservation can help us live in a healthier, more deliberate fashion. It can help us discover the power and joy of working with ordinary, garden-variety natural processes. And it is one of the most accessible ways of avoiding that most damning verdict from our descendants: “Didn't you know that all this was happening? Why didn't you do anything about it?”

— Chris Bright, President



## WILD PLANTS @ SCHOOL

A few years ago, in response to growing demand for pollinator gardens, we started supplying schools with “garden kits” that have species lists drawn from actual natural communities. We followed that up with our *Wild Garden Manual*, a booklet drawing on years of our own growing and gardening experience, and aimed at teachers and other educators looking to get started with native plants.

Last school year we launched a program for schools with existing native plant gardens. Our Classroom Wild-Plant Propagation program began as a pilot project with W.T. Woodson High School in Fairfax City, and George Washington Middle School in Alexandria City. This school year, we will reach at least five more public and private schools in Northern Virginia, including elementary, middle, and high-school levels.

Here’s the how the program works: this fall, I’m helping students collect seed from native plants already in school gardens. In many cases, these plants came from our own Wild Plant Nursery. After winter break, we’ll clean and sow the seed (we’ll donate more seed if necessary) and the students will be entrusted with making sure the plants stay watered through the winter. We’ll supply the pots, growing media, and watering cans. And thanks to generous support from the Get2Green program, Fairfax County Public School partners will have access to grow lights. Once spring rolls around, the students will be able to plant their own classroom-grown native plants in garden beds around the school.

By introducing students to the entire process of native plant propagation, we are helping them to play a self-sustaining role in improving school landscapes.

Keep an eye out for updates on the program in future issues of the *Acorn*. We hope to hear from some of the students themselves.

— Matt Bright, Conservation Manager

**Photo:** An endangered tree returns to the Tree Bank’s Nature Reserve. In September, after a morning of planting in the Reserve, Tree Bank farmers gathered near a 3-year-old grove of Hispaniolan pine. These saplings were our first planting of this species, which once dominated hundreds of square miles of Hispaniola and is now listed as endangered by the IUCN.

**EARTH SANGHA**  
CONSERVATION IN PRACTICE

The Earth Sangha is a nonprofit 501(c)(3) charity based in the Washington, DC, area and devoted to ecological restoration. We work in the spirit of Buddhist practice, but our members and volunteers come from a wide variety of religious and secular backgrounds.

**Want to contact us or make a donation?** You can support our work by becoming a member. Membership starts at \$35 per year. Donations are tax-deductible. You can mail us a check (made out to “Earth Sangha”) or donate on our website. We will send you a receipt and include you in our mailings. (If your name and address are correct on your check, there is no need to send us anything else.) To donate specifically to our DC-Area programs, write “DC-Area” on the check memo line; to donate specifically to the Tree Bank, write “Tree Bank” on the memo line. [Contact us at: Earth Sangha, 10123 Commonwealth Blvd., Fairfax, VA 22032-2707 | \(703\) 764-4830 | earthsangha.org](mailto:info@earthsangha.org). Complete program information is available on our website.

**Want to volunteer with us?** We work with volunteers at our Wild Plant Nursery and our field sites in northern Virginia. For more information see our website or call Matt Bright at (703) 764-4830.

**The Acorn:** Our newsletter is printed on paper that is 100% post-consumer waste recycled, process chlorine-free, and manufactured entirely with wind-generated electricity. This issue copyright © 2018, Earth Sangha.

**Gold-rated:** The Earth Sangha has a gold rating from GuideStar Exchange for commitment to transparency.

**One of the best:** The Earth Sangha is recognized by the Catalogue for Philanthropy as “one of the best small charities in the Washington, DC, region.”



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