

**Your Living Earth[®]
Troubleshooting Guide**

For more detailed instructions watch the documentary *Regenerating Life*



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English

Congratulations! *Your Living Earth[®]* is a self-sustaining, self-regulating habitat that should give you years of pleasure. However, many human populations have a tendency to destroy their environments. This can cause a systems breakdown that results in extreme storms, floods, droughts, heat spells, wildfires, and desertification. This is often referred to as "climate change," which can be severe, but is generally fixable. Please note that this is not a recall notice nor a warranty extension. This is a troubleshooting guide that starts with common complaints and works through solutions. Please keep in mind that *Your Living Earth[®]* is able to repair and sustain itself, if given a chance. In the case of long-term abuse, it is important to intervene immediately and support the natural processes.

Please review this entire document before selecting your individual solution task. *Your Living Earth[®]* offers many points of intervention in the case of a systems breakdown. In the end, all of these solutions should be implemented, because they depend on one another.

NOTES (continued from other side)

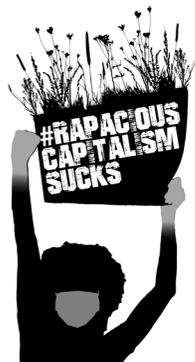
Living Earth's[®] cooling system is in overdrive, so to speak. This is good news and bad news. The good news is that the storms are cooling the planet, and delivering a lot of fresh water onto the land. The bad news is that these hurricanes are destroying homes and damaging coastal ecosystems.

As part of the solution, your populations must learn to build resilience to these storms as well as to rebuild the soil and natural fresh water infrastructure. The objective here is to hold rain water on the land for as long as possible so that it is available for drinking, irrigation and to help nature regrow the forests and other ecosystems.

5. Your society and industries are burning too much: fossil fuels, forests, crop residue, garbage and waste.
6. Humans are to a large extent a herd animal. Most people generally do what their neighbors do – that's the prudent approach. This is called "the Prudent Lemming Law." Through skillful use of media, political and legal systems, large corporations and political entities have learned to manipulate the "masses," and to censor and suppress original "out of the box" thinkers. An exploitive economy which extracts wealth from the land and from people has persisted for a very long time. There are cultures that have lived far more harmoniously with the land than the "civilized" world has been doing. We can learn from them.

Limited 5 billion year warranty. Warranty shall be void if Product: is not installed, used or maintained strictly in accordance with manufacturer's specifications.

What's going wrong?	Suspected Cause	Check this first	Solution	What you can do locally. Questions to ponder
<p>Is your Earth overheating?</p> <p>Are you seeing more extreme temperatures?</p>	<p>Deforestation</p> 	<p>Check for bare land.</p> <p>Most of the land surface on your Earth that is not ice or water should have green vegetation to reduce global warming and cool the planet.</p> 	<p>Cover the land with plants to reduce the greenhouse warming effect.</p> <p>Use "cover crops" on agricultural fields.</p> <p>Reforestation.</p> <p>STOP destroying the forests. Find some way to offer financial incentives to save and rebuild forests.</p>	<p>Bare land radiates much more heat than land covered in plants. Think about the difference between walking barefoot on sand or grass.</p> <p>Plant plants! Everything helps: potted plants, balcony, roof, and "victory" gardens. Replace grass lawns with gardens.</p> <p>Support all efforts to save the forests. Think about the difference between using the forests and overusing them.</p> <p>Remember, even a dead tree is a living ecosystem.</p> <p style="text-align: right;">*Note 1</p>
<p>Are you experiencing severe floods? Droughts? Wildfires?</p> 	<p>Your soils are not holding the rain water.</p> <p>Your wetlands have been destroyed.</p>	<p>Check the soil in agricultural and park areas. If it crumbles like a dry powder, it is dead.</p> <p>Check for visible life in the soil – plants, lichens, fungi, worms, insects — all the little critters that indicate living soil.</p>	<p>Ecological agriculture</p> <p>Governments should subsidize ecological agriculture (not industrial ag.)</p> 	<p>Eat local ecologically-grown food — plants and animals.</p> <p>If you have a garden or a lawn of any sort, think about rebuilding your own soil carbon sponge and having a garden with diverse plants. Do not use pesticides or chemical fertilizers; use mulch.</p> <p>Support agro-forestry.</p> <p style="text-align: right;"> *Note 2 See important health and nutrition note: 2A</p>
<p>Are your communities experiencing a lack of fresh water for drinking and irrigation?</p>	<p>Destruction and industrialization of regional small water cycles.</p> 	<p>Check immediately to see if the forests along the ocean coasts have been cut down or reduced significantly.</p> <p>When water runs downhill does it meander gradually through streams and ponds, and lush wetlands, or does it go into concrete pipes and gigantic gutter systems that drain it too quickly instead of allowing it to infiltrate into the ground and replenish aquifers?</p>	<p>Rebuild natural barrier reefs and swamps,</p> <p>Physically rebuild the streams, dams (leaky dams, like beaver dams, are best), ponds, rivers, swamps and wetlands and restore the associated ecosystems. Bring back beavers.</p> 	<p>There is plenty of fresh water; what's lacking is Your Living Earth's ability to keep water on the land. What happens to a rain drop when it lands in your community?</p> <p>Think about how water flows through you and through the biosphere. Where does the water you drink come from? Where does your pee go?</p> <p>If you live in a vulnerable coastal area, think about moving further away from the coast. Think about ways to rebuild the ecosystems between the ocean and the land that are a natural buffer between you and the powerful ocean waters.</p> <p style="text-align: right;">*Note 3</p>

What's going wrong?	Suspected Cause	Check this first	Solution	What you can do locally. Questions to ponder
<p>Are you experiencing increased storms and hurricanes coming from the oceans and destroying your homes?</p> 	<p>Yikes, this means your ocean surface temperatures are warming significantly.</p> 	<p>Check for flooding.</p> <p>Check for any destruction of ocean and tidal zone ecosystems.</p> <p>Check to see if your homes are being destroyed by "extreme weather events"</p>	<p>The hurricanes and storms are the oceans' cooling system in action. At this stage in your crisis, they are inevitable.</p> <p>Immediate action should be taken to protect lives and property.</p> <p>Support all efforts to restore ocean ecosystems.</p>	<p>Don't use chemical fertilizers and pesticides – because no matter what you do, these will run off into the ocean and cause problems there.</p> <p>Think about what you are, personally, putting into the water system that will one day make it to the ocean. Don't put medications down the toilet; reduce your use of plastics.</p> <p>The storms will only be reduced once significant land areas are covered, and forests and soils are regenerated by restoring life in them. In the meantime, take advantage and make good use of the fresh water coming in from the ocean.</p> <p style="text-align: right;">*Note 4</p>
<p>Are you experiencing massive and persistent brown humid hazes that have a warming effect?</p>	<p>Increased aerosol load (dust and smoke) especially in areas that don't have trees.</p> 	<p>Check for "smog" in cities.</p> <p>In the areas where you find these brown hazes check for the presence of trees and shrubs because these deliver precipitation nuclei that are necessary for rain.</p>	<p>Reduce the burning of fossil fuels.</p>  <p>Stop burning crops, forests, garbage, and waste.</p> <p>Plant more trees in cities.</p>	<p>Use solar power and renewables as much as possible. Insulate your homes extra heavily and use energy efficient appliances.</p> <p>However, do not fall into the popular error of confusing your "energy crises" with your "climate/ environmental crises." They are different problems. (This document does not address energy-related issues).</p> <p style="text-align: right;">*Note 5</p>
<p>Is <i>Your Living Earth</i>® experiencing widespread hunger, poverty, thirst, and unrest? Are the rich getting richer and the poor getting poorer?</p> <p>Any wars lately?</p> 	<p>Your economic and political systems are being gamed by greedy, ambitious, people.</p>	<p>Check to see if your legal systems have given "personhood" to corporations and groups of people whose mission is to grow and accumulate wealth and power.</p> <p>Check to see if the popular understanding of evolution is reflected in the expression: "survival of the fittest."</p> <p>Are your schools, businesses, economic, legal and political systems based on competition instead of shared understanding and collaboration?</p> <p>Is bullying a successful strategy in your societies?</p>	<p>Rebuild your economic and political systems.</p> <p>Develop sharing and circular economies.</p> <p>Change laws so that corporations aren't considered people.</p> <p>Shift the prevailing understanding of evolution from competition to collaboration.</p> <p>Stop fighting so much. Learn to get along. Take a stand against bullying.</p>	<p>Do people really need all that stuff?</p> <p>Buy products that will last for a lifetime, and that are repairable and/or recyclable.</p> <p>Everything cycles. Manufacturers should be responsible for recycling their products. From cars to toys, the maker/distributor of these products should put in place systems, processes and businesses for recycling everything.</p> <p>Have and encourage conversations and friendly discourse with neighbors who don't agree with one another.</p> <p style="text-align: right;">*Note 6</p>

NOTES:

- It is important to have as little bare or concreted land as possible. Covering the land with plants reduces the greenhouse warming effect because covered/shaded land reradiates far less heat (infrared radiation) than bare land. But remember the greenhouse effect is a good thing because it keeps *Your Living Earth*® from freezing. Of the greenhouse gases, water vapor is the most abundant, but it's virtually impossible to untangle the effects of one greenhouse gas from the other. They work together to insulate the planet and to regulate the flow of heat away from the Earth.

Forest ecosystems are a vital part of the Earth's temperature regulation system. Trees and all plants circulate water from their roots up into their leaves, from which it evaporates through the process of transpiration. Transpiration is plants' and trees' way of "sweating." As water evaporates off skin or off a plant's leaves, it requires 590 calories per cubic centimeter (gram) of water to change its phase from liquid to vapor. The water vapor then takes that energy upward. As the vapor get higher it condenses and forms clouds, which releases that "heat of evaporation" into the atmosphere and if the clouds are high enough, the heat is radiated out into space. Then when the rain comes down, it will be held in the soil.
- The soil is a sponge that covers the land. Even wetlands and oceans have soil. This "soil carbon sponge" is full of countless organisms and was formed by them, especially fungi. This sponge holds water. This reservoir of water becomes a buffer so that water is always available to plants and animals.

Agricultural soil is killed by over-plowing and chemical inputs – notably

pesticides. When the soil is dead, it doesn't hold water, so storm waters run off and cause floods. Flood waters run off quickly, causing mudslides followed by droughts and the potential for destructive fires.

- 2A. Important health and nutrition note:** Although it is outside the scope of this troubleshooting guide, an added benefit of building healthy living soils is the tremendous gain in human nutrition coming from food grown in those soils. Nutritious food leads to healthy humans.
- Fresh water is abundantly supplied by the oceans, through storms, wind, and the biotic pump. The biotic pump is a process through which coastal forests draw moist air inland.

When things are working, the rain water is held on the land and in the soil so that it is available for life. Gradually it meanders back down to the oceans through streams, lakes, rivers and marshes. By killing the soil and destroying the fresh water ecosystems, we have dried up the land. This bare dry land amplifies greenhouse warming effects which lead to wild fires. Most importantly, the water is not available for the land's cooling system which works through transpiration and rain.

There are engineers and organizations developing ways to build back and restore the natural hydrological systems that allow rain water to gradually flow through the land on its way to the ocean.
- The oceans are a vital part of the Earth's cooling system. This happens by evaporation. The process of evaporation – coupled with rain -- takes heat away from the Earth and puts it out to space. The evaporated water forms clouds and then comes down as rain – often a lot of rain with high winds like in hurricanes. If your planet is experiencing a lot of hurricanes, then *Your*