

THE LIVE EARTH

# GLOBAL WARMING SURVIVAL HANDBOOK

DAVID DE ROTHSCHILD

OFFICIAL  
COMPANION  
TO THE  
LIVE EARTH  
CONCERTS



77 Essential Skills to Stop Climate  
Change—or Live Through It



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**LIVE EARTH**

THE CONCERTS FOR A CLIMATE IN CRISIS

# The Global Warming Survival Handbook

77 Essential Skills to Stop Climate Change—  
or Live Through It

David de Rothschild

FOREWORD BY **Rob Reiner**

AFTERWORD BY **Kevin Wall**

ILLUSTRATIONS BY **William van Roden**

PRODUCED BY **Melcher Media**

WITH CONTRIBUTIONS BY Adam M. Bright, Max Dickstein,  
Mikki Halpin, Kira Gould, Shelley Lewis, Aaron Naparstek,  
Erik Ness, Andrew Postman, Hillary Rosner, Kate Sekules,  
Amanda Park Taylor, Jocko Weyland, Lizz Winstead, and  
Michele Zipp



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# Contents

Foreword	6
Rob Reiner	
Preface	7
David de Rothschild	
Climate Control: An Introduction to Global Warming	8
10 Easy Steps to Help Fight Global Warming	12
How to Read This Book	14
The 77 Skills	15
<b>If All Else Fails</b>	<b>133</b>
Afterword	154
Kevin Wall	
Glossary	155
Resources	156
Acknowledgments	160



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Acknowledgments	160

# Foreword

Rob Reiner

DIRECTOR, ENVIRONMENTALIST

## At Live Earth, we are sending a message to the world: S.O.S.

It's a distress call to Save Our Selves from our climate crisis. It is the most urgent message we can deliver to our friends, to our leaders, to the rest of the world.

Our climate crisis affects everyone, everywhere. The Earth's temperature is rising. Our water and food sources are becoming scarce, our oceans polluted, our coastal cities and island countries endangered. And its magnitude means that only a truly global response can address it.

The good news is that each of us can take action to solve this crisis. All of us have a role to play, and none of us bears the burden alone. We have the know-how and the technology. Cleaner cars, wind farms, solar power, even better lightbulbs.

This book outlines 77 skills we can practice today. As you will see, many of them are simple, easy, and inexpensive to perform. Some require a larger commitment of time and resources. We are all at different stages of awareness and action, and whether you are just beginning or you are an expert on this issue, this book has something for you.

Live Earth is the start of a global environmental movement, one that harnesses the power of everyone working together. So let us not be overwhelmed by the size of the problem. The positive sum of small actions, multiplied by millions of people, can lead to dramatic effects. You are part of this movement and the small changes you make will add up.

# Preface

David de Rothschild  
FOUNDER, ADVENTURE ECOLOGY

I have always been more interested in what's going on outside my window than inside.

This natural curiosity has been the source for some extraordinary adventures. I have had the incredible opportunity to spend many months in some of the world's most fragile ecosystems. It was during a polar adventure that I truly began to grasp the scale and complexity of climate change. Standing in the midst of the Arctic, surrounded by 14 million square kilometers of frozen ocean, I felt like nothing more than a speck of dust on the endless horizon of Earth's most raw, majestic, and environmentally significant ecosystem.

That expedition, to cross the Arctic Ocean, was halted when warm temperatures made the ice too vulnerable. And it suddenly became clear that thinking of protecting the planet was no longer enough; what we have to think about is our ability to survive on this planet. We need to have the necessary skills in order to do so.

In all of my travels, I've found that luck favors the well prepared. Hence, *The Global Warming Survival Handbook*. I hope it will prepare you with the skills needed for stopping climate change—and for living through it, should we not take the necessary steps!

It's our responsibility as "globalsapiens" to create a more sustainable path than the one we have followed. The time has come to stop being part of the problem and to become part of the solution.

Despair does not inspire action. The 77 skills described here will encourage action as well as thought. Most important, this handbook should motivate you to join the millions of others on the adventure of transforming Earth's "hot spots" into "hope spots."

# Climate Control: An Introduction to Global Warming

Discussing the weather used to be so casual.  
*Nice day, huh? Or, You believe all this rain?*

It's harder these days—even our small talk is controversial. *Scorcher, isn't it? Must be that global warming.* For many, the greatest environmental threat that humans have ever faced is a political issue.

But it's not. Global warming is a matter of scientific fact: 2006 was the sixth-warmest year on record since 1850; the top five spots are held by 1998, 2005, 2003, 2002, and 2004. Whether you're a Kiribati fisherman losing your island home to the rising sea or a snowboarder who couldn't find any snow last January, climate change is making its presence known.

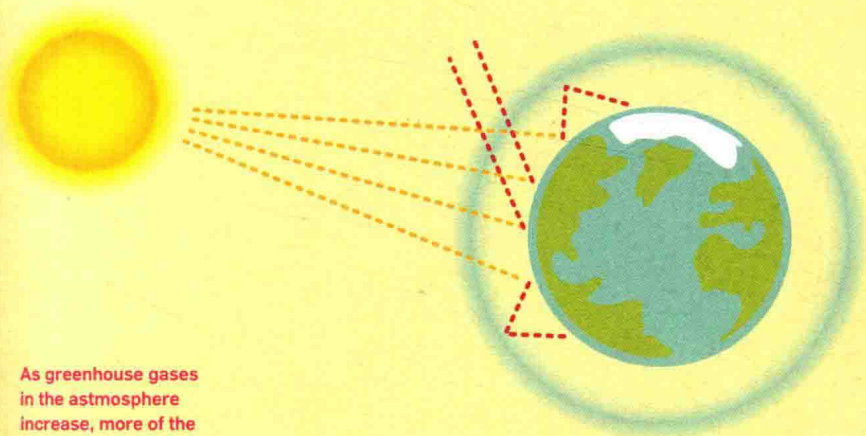
If we fail to recognize the immediate nature of this threat, the consequences could be catastrophic. Rising seas, searing temperatures, killer storms, drought, plague, pestilence. Finding solutions begins with identifying the problem. Briefly, here's how global warming works. Energy from the Sun, in the form of light and heat, warms the Earth. Heat rises, and some of it heads back into space. Most of it, though, is trapped by molecules in the atmosphere—molecules of “greenhouse gases,” named because their effect is just like that of a greenhouse. Water vapor is a primary greenhouse gas, in addition to carbon dioxide (CO<sub>2</sub>), methane, and nitrous oxide. All are natural—indeed, without the greenhouse effect, the Earth would be cold and uninhabitable.

The problem is, we have greatly increased the amount of CO<sub>2</sub>, methane, and nitrous oxide in the atmosphere—mostly by burning things, like forests and fossil fuels. Before the Industrial Revolution, there were 280 parts per million (ppm) of CO<sub>2</sub> in the atmosphere. Today, CO<sub>2</sub> is about 380 ppm. Factor in all the other man-made emissions, and the result is equivalent to 430 ppm of CO<sub>2</sub>.

The more greenhouse gas molecules, the more heat the Earth keeps. The atmosphere is so huge, change seems to occur slowly, if at all, but these increases are adding up. Over the last 30 years, the Earth's average temperature has warmed by a full 1°F. One degree may not sound like much—but the Little Ice Age in the middle of the last millennium was signaled by a shift of only 2 to 4°F. Inertia in the system will warm us at least another 1°F by 2020.

But humans are not sitting still; greenhouse emissions are accelerating, and at current growth rates we will double the preindustrial levels of gases by 2050. If countries such as China and India adopt the same carbon crutch the U.S. relies upon, the doubling could arrive as early as 2035.

What happens then? With a doubling of greenhouse gases, a 4°F rise in global average temperature becomes likely within this century. And all kinds of nastiness kick in at that point. By 2080, up to three billion people could suffer water shortages, and 200 to 600 million could face famine. Twenty to 30% of all species may face extinction. The melting of the Greenland Ice Sheet would accelerate, raising sea levels by as much as 23 feet.



As greenhouse gases  
in the atmosphere  
increase, more of the  
Sun's energy is trapped.

## GLOBAL CHANGES POSSIBLE AS A RESULT OF INCREASING GREENHOUSE-GAS LEVELS

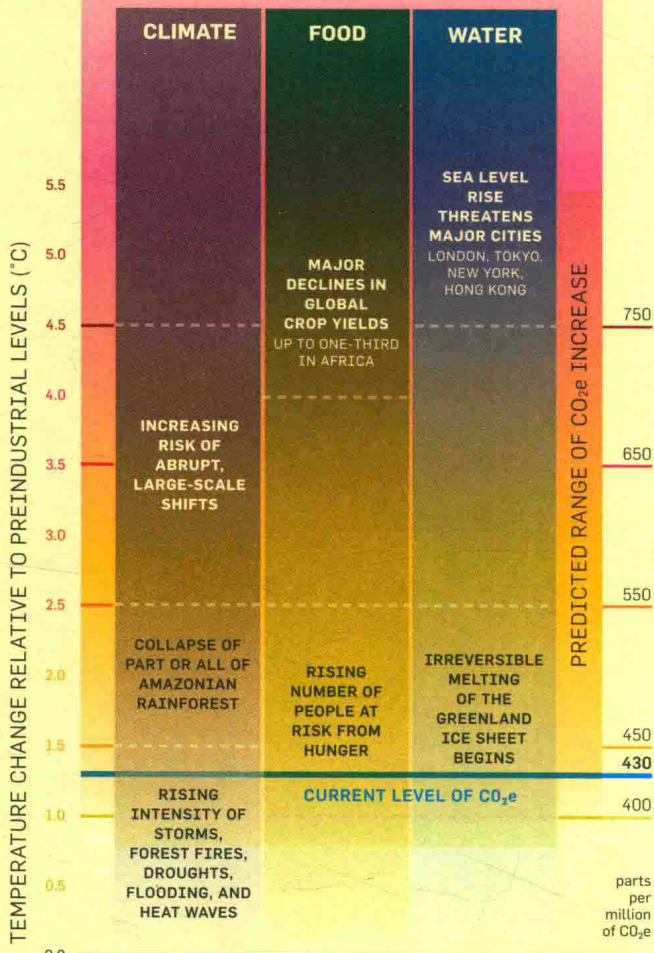


CHART BASED ON THE STERN REVIEW ON THE ECONOMICS OF CLIMATE CHANGE

We are speeding into a troubling void. Nobody knows exactly how it's going to unfold. But the broad outlines are quite clear, absolutely devastating, and backed by evidence that almost every reputable scientist now calls *overwhelming* and *unequivocal*. These are not common words in the scientific vocabulary. But after decades of study and debate, the leading scientific organizations around the world now call climate change a real and pressing threat.

Science has given us unprecedented foresight. Now we must find the conviction to act. James Hansen, a NASA climate researcher, believes that "we have a very brief window of opportunity to deal with climate change . . . no longer than a decade, at the most." How we face the next few years could profoundly affect the rest of history. If we don't begin to change today, it may be too late.

The task ahead is monumental. It's far bigger than what one person can do—bigger even than what one country can do. Just to keep greenhouse gases at their present level will require slashing our emissions by 60%. To *lower* the level of gases and to reverse the warming already underway, the entire fossil-fuel economy that brought us to unprecedented prosperity and technological prowess will need rethinking. In the short term, we need to tweak it—throw fingers in the dike to stanch the flow of carbon. In the long term we may need to remodel, reinvent, and renew some major building blocks of society.

Your help is needed. You've got to take your share of small steps—around the house, around the office, in your neighborhood—because little things multiplied by the million add up, just as surely as individual CO<sub>2</sub> molecules add up. We also need you to educate your friends about policy initiatives, to support and vote for leaders who have the vision to make a difference, to help remodel our cities, and to invent the technologies of the future. The journey begins with some small talk about the weather.

The graph on the opposite page illustrates the types of impacts that could be experienced as the world heats up because of greenhouse gases. Different levels of CO<sub>2</sub> in the atmosphere bring a variety of large-scale effects.

# 10 Easy Steps to Help Fight Global Warming

Adapted from Adventure Ecology's *Top 10 for the Planet*

## 1 Adjust Your Climate by Two Degrees

### **SEE SKILL #20, PUT ON A SWEATER**

Turning your heat down by 2°F in the winter and your air-conditioner up by 2°F in the summer can save our planet from more than one-third of a ton of CO<sub>2</sub> emissions per year.

## 2 Change a Lightbulb

### **SEE SKILL #3, REPLACE A LIGHTBULB**

If every household in the United Kingdom used just one energy-saving lightbulb, it would be enough to shut down a power station.

## 3 Stop Appliances from Standing By

### **SEE SKILL #10, KILL YOUR PHANTOMS**

Those little red lights on your TV, stereo, and computer? They're on standby, waiting for your remote click, and still sapping energy. Turn them off for real by unplugging them, and cut your home energy-related emissions by 10% or more.

## 4 Say No to Plastic Bags

### **SEE SKILL #38, CHOOSE THE RIGHT BAG**

The story of the 500 billion to 1 trillion plastic bags used each year doesn't have a happy ending. Most end up in landfills, blowing through the streets, or hurting animals on land and in the sea.

## 5 Shop Locally

### **SEE SKILLS #29, COUNT YOUR FOOD MILES, AND #30, BEFRIEND YOUR FARMER**

On average, each item in your local supermarket has traveled at least 1,000 miles to get to you. Buying locally produced food reduces the amount of energy used for transportation.



## 6 Bring Your Own Mug

**SEE SKILLS #18, SAY NO TO STYROFOAM, AND #25, GREEN YOUR CUBE**

Bring your own travel mug. Disposable cups (and lids!) go directly into landfills, where they've become a major presence.

## 7 Go Public

**SEE SKILL #36, DECONGEST DOWNTOWN**

One bus can carry the same number of people as 50 cars. Subways and trains hold even more. For every mile you travel, public transport uses around half the fuel of a private car.

## 8 Bike or Walk

**SEE SKILL #35, RIDE A BIKE**

Bike or walk to work, to school, to the store—doing so just once a week will give the planet a much-needed break from the CO<sub>2</sub> emissions of your car.

## 9 Say Yes to Short Showers

**SEE SKILL #45, TAKE A BATH TOGETHER**

Global warming promises to worsen water shortages around the world. A quick shower uses one-third the water of a bath. Cutting your shower time by one minute can save more than 500 gallons of water each year.

## 10 Plant Something

**SEE SKILLS #28, GROW YOUR OWN TOMATO, #39, PLANT A TREE (MINDFULLY), AND #48, GREEN YOUR ROOF**

Plants take in CO<sub>2</sub> and pump out oxygen. A single tree provides enough oxygen for two people for their entire lives. Plants and trees provide homes and food for birds and other wildlife.