The Rough Guide to Climate Change 1 (Rough Guide Reference)

Robert Henson
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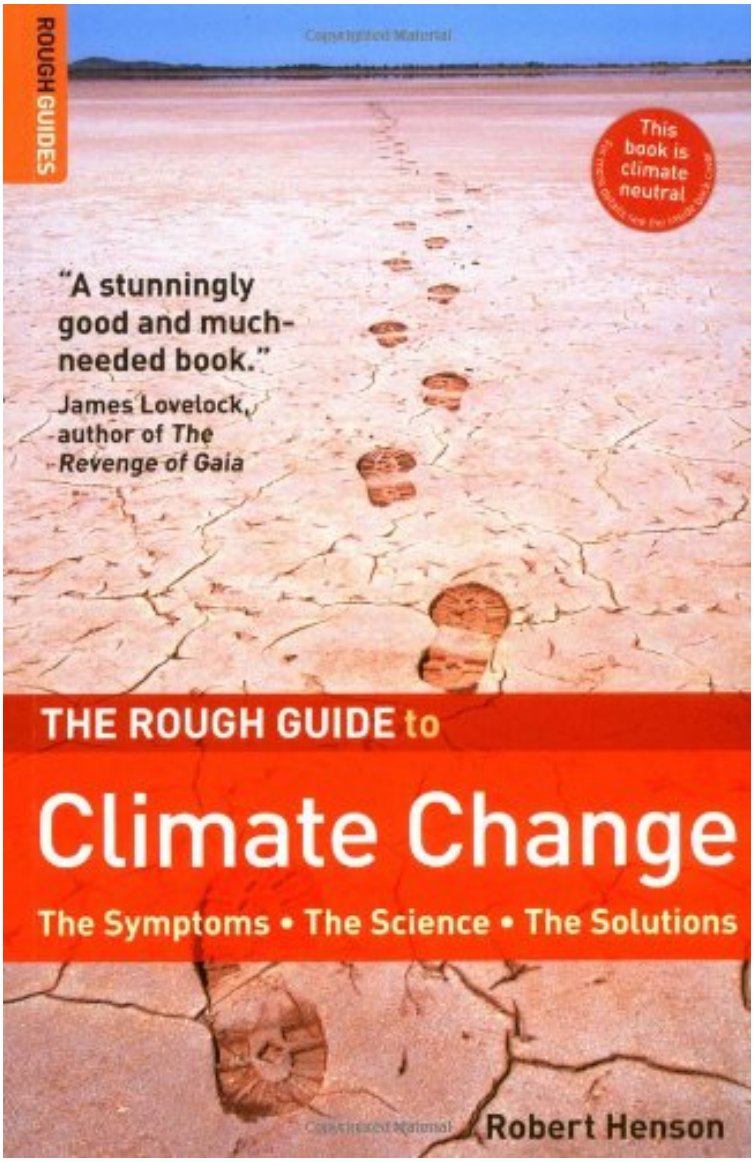

#3841261 in Books Rough Guides 2006-10-30Original language:EnglishPDF # 1 7.84 x .67 x 5.11l, .31 #File Name: 1843537117352 pages | File size: 47.Mb

Robert Henson : The Rough Guide to Climate Change 1 (Rough Guide Reference) before purchasing it in order to gage whether or not it would be worth my time, and all praised The Rough Guide to Climate Change 1 (Rough Guide Reference):

63 of 71 people found the following review helpful. Excellent, but some rough spots.By Brian H. FiedlerThough small in size, this book is thorough and packedwith the latest information about climate change. Themargins are not overly generous. The typography is tight.The binding is excellent, with informative fold-outgraphics on the front and back

covers. A bargain pricefor such a well-edited, well-researched and well-constructed book.Although the book may be intended for the non-specialist,I would recommend that all university students ofatmospheric sciences read this book. I will berecommending this book as a supplementary text inuniversity courses -- a purpose probably not intendedfor this sort of book. The book is not mathematical.Nevertheless, many issues are raised that will inviteformal mathematical analysis in the classroom.The book has some rough spots. Indeed the rough spotsprovide the invitations for a mathematical re-examination.page 16: "Even if we turned off every fuel-burningmachine on earth tomorrow, climate modellers tell usthat the world would warm at least another 0.5 C(0.9 F) as oceans slowly release the heat they'vecollected in recent decades." This should be stated as"...as oceans slowly warm and adjust toward the newradiative equilibrium state with higher greenhouse gas concentrations."page 100: "Even if we stopped emitting greenhouse gasestomorrow, we're committed to some amount of warming...asthe heat tucked away from the deep oceans gradually seepsupward." This is the same mistake as on page 16. Evenwith CO2 fixed at the current 380 ppmv the oceans andatmosphere would warm for decades, with heat seepingdownward into the oceans. The warming will be caused bymore radiation entering the atmosphere than leaving.Another way to repair the sentence is to state: "Evenif we returned greenhouse gases to preindustrial valuestomorrow, we're committed to elevated temperatures formany decades...as the heat tucked away from the deepocean gradually seeps upward."page 36: "...greenhouse gases carry several times morepunch when they are emitted at altitude". The wordshould be "exist" rather than "emitted". The lifetimeof a CO2 molecule in the atmosphere is a "century" (p. 24).And on page 29: "the gas should be well mixed throughoutEarth's atmosphere". On page 172: "Longer-lived greenhousegases, such as carbon dioxide, are thoroughly mixed acrossthe troposphere, both horizontally and vertically". For agreenhouse gas molecule that will exist in the atmospherefor 100 years, what difference does it make as to whereit was released?page 166: "Nobody doubts the existence of the heat-islandeffect, by which dense buildings and paved areas of citiesabsorb heat and ricochet it through the the city air."A more rigorous explanation of the heat-island effect iswarranted, preferably one that doesn't use the word"ricochet", and one that uses energy balance principles.The wikipedia has a decent summary of the physics.page 172: "Since ozone absorbs sunlight, its partial lossin the lower stratosphere for the last twenty years or sohas allowed temperatures there to plummet..". It wouldbe worthwhile to mention that declining tempertures inthe upper stratosphere are primarily attributable toincreasing carbon dioxide. The cooling is happeningright on schedule, and accord with our theories ofatmospheric radiation. Indeed, radiative energy balanceanalysis (of the sort that exists in all climate models)shows that a cooling of the stratosphere amplifies thewarming of the troposphere and surface.page 304: "Hydrogen, the simplest and most abundant elementon Earth...". Geology classes teach 34.6% Iron, 29.5% Oxygen,15.2% Silicon, ... If we substitute "in the universe" for"on Earth", the statement is true.2 of 2 people found the following review helpful. Great book for anyoneBy Adam FrancisThe book presents the information in a way not unlike a college textbook. Initially it clearly states the facts and objective, and then elaborates on them in a way that is interesting. I also liked how it had the side stories strategically placed among relevant chapters.Climate Change is comprised of six different main parts including: The basics, The Symptoms, The Science, Debates and Solutions, What you can do, and Resources. It explained everything from how the climate ties into the oceans and impacts on humans, but also by humans. It offers not only solutions on what the International community can do, but what an individual can do. Suggestions like what to do from home energy to shopping to offsetting emissions. Solutions are easy to achieve, and guides you through how to accomplish them.The complex matters were made very easy to understand for the non scientist. The science behind climate change is so complex and requires many different disciplines of science. Robert Henson has laid the material out in a logical manner. Anyone seeking more information on the science behind it can pick up this book and understand it. The book is also very current and up to date with reference to current Global Circulation Models, data and statistics.One problem that I did find with the book was a fact about greenhouse gas emission referring to the amount of CO2 sequestration. The book states that 25% of all CO2 is absorbed into the ocean. From my understanding this is not the case. Upon further research I found that 50-55% of CO2 is absorbed during the carbon dioxide cycle. This was the only statistic that I could find wrong in the book. Much of the information in the book toward the end can be naturally subjective, but it was defended in a way that I believe would make is hard for even the diehard skeptic of climate change to deny.17 of 18 people found the following review helpful. Encyclopaedic, yet readableBy Stephen A. HainesIt seems almost extravagant to publish yet another book on climate change. This one, however, bears the benefit of being almost extravagantly comprehensive. Henson has assembled a wealth of data, presenting it in a superbly organised and accessible account. Although the term "Rough Guide" might imply a superficial approach to the topic, this book is anything but that. In slightly over three hundred pages, the author covers the current conditions, the history leading up to those and what processes are in place to influence climate. He also deals with how the sciences investigating climate change work, and why we should pay attention to them.His analysis of policies addressing climate change, in particular his descripton of the Kyoto Protocols, is unsurpassed. He even includes how the arts, well and poorly, have adopted climate themes into their productions. Although he recognises the failings of such films as "The Day After Tomorrow", he accepts their role in raising public consciousness. This enlarged awareness has been manifested [...]which uses idle computers to assess data used in modelling climate change. Henson's explanation of computer modelling is on a par with the rest of his

presentation; clear and informative.The author repeatedly stresses that while climate change is a global phenomenon, it is individuals who will make a difference in its onset and impact. Accordingly, his suggested solutions will bear close scrutiny. As well as Kyoto's broad view, Henson examines the alternatives or enhancements for their likely effectiveness. The recent initiative by The Asia-Pacific Partnership, based on voluntary controls and shared technologies, is covered, as is the Contraction and Convergence model. Most importantly, the author's coverage of personal changes in energy consumption and pollution reduction is very helpful. He makes clear that none of the steps requires drastic change in lifestyle nor the outlay of substantial funds. To this end he closes with a list of useful resources of information on all aspects of the topic. If there is a shortcoming in this book, it is the process used to save paper and money. The reduced size of the volume means packing all that information into a small space. The typeface is miniscule and the reading can be excruciating. Energy-saving lightbulbs in your house may lead to impaired vision from sifting through so much information. [stephen a. haines - Ottawa, Canada]

The Rough Guide to Climate Change is a complete, unbiased guide to one of the most pressing problems facing humanity. From the current situation and back ground science to the government sceptics and possible solutions, this book covers the whole subject. The guide looks at: Visible symptoms of change from a warming planet How global warming works. The evolution of our atmosphere over the last 4.5 billion years What computer simulations of climate reveal about our past, present, and future The sceptics: Who are they? What are their grounds for disagreeing with the crowd? Battle of the titans: The oil industry vs. the global commons Global warming in the media: A review of the last few decades. Global solutions: What governments and scientists are doing to try and solve the problem Plus much, more. The guide also includes lifestyle advice and tips for consumers who want to make a difference in tomorrows climate, and comes complete with a gloassary of websites for further information.

About the AuthorBob Henson works at the internationally recognised National Center for Atmospheric Research. Henson"s previous books include the well-received Rough Guide to Weather.