# Contents

Acknowledgments           page viii  
Why this book?             ix  

**PART I EARTHQUAKES, DEEP TIME, AND THE POPULATION EXPLOSION**  
1 Plate tectonics and why we have earthquakes  3  
2 An earthquake primer      25  
3 Deep time                 34  
4 When’s the next Big One?  43  
5 Population explosion and increased earthquake risk to megacities  63  

**PART II EARTHQUAKE TIME BOMBS**  
77  
TIME BOMBS WHERE THE PROBLEM IS UNDERSTOOD, BUT THE RESPONSE IS STILL INADEQUATE  79  
6 San Francisco Bay Area    80  
7 Los Angeles               85  
8 Seattle, Portland, and Vancouver: Cascadia subduction zone  101  
9 Japan: Tokyo and the Kansai  129
## CONTENTS

10 Wellington, New Zealand 135
11 Santiago, Chile 141
12 Prologue in central China 145

**OTHER TIME BOMBS, INCLUDING CITIES THAT ARE NOT WELL PREPARED** 157
13 Age of Enlightenment and the 1755 Lisbon earthquake 158
14 Jerusalem: earthquakes in the Holy Land 164
15 Istanbul: responding to an official earthquake warning 179
16 Tehran: the next earthquake in the Islamic Republic of Iran? 196
17 Kabul: decades of war and Babur’s warning 209
18 Earthquakes in the Himalaya 218
19 Myanmar and the Sagaing fault 235
20 Metro Manila, the Philippines 243

21 Lima, Peru: Inca earthquake-resistant construction and a bogus American earthquake prediction 251
22 Andean earthquakes in Quito and Guayaquil, Ecuador 262
23 Caracas: lots of oil, but little interest in earthquakes 270
24 Haiti, which lost its gamble, and Jamaica and Cuba (not yet) 278
25 Mexico City: bowl of jello inherited from the Aztecs 289
26 Central America and the earthquake that brought down a dictator 299
27 East African Rift Valley: a tale of two cities 311
Part III Summary and Recommendations 319
28 Where do we go from here? 321

References 334
Index 338