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World Environmental History

THE RESILIENT CITY IN WORLD WAR II

Urban Environmental Histories



EDITED BY

*Simo Laakkonen, J. R. McNeill,
Richard P. Tucker, and Timo Vuorisalo*



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The Resilient City in World War II

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FOREWORD

This book is not merely about the fate of cities during World War II—although that is an important topic unto itself—but a comment on the potential resilience of cities within a wartime setting. Such a focus has to contend with resilience within a specific time frame and over a wide geographic expanse. And like most studies of cities and urbanization, it has to confront endless differences in demography, spatial location, environmental conditions, and the particular ways in which war came to the cities (and then left).

Within a spectrum of experiences—from isolation from the war to destruction and annihilation—are an infinite number of possible outcomes and specific impacts. In this sense, *The Resilient City in World War II* is more speculative than exhaustive. Indeed, the variety of topics touched upon (or suggested) should open many conversations about war, the environment, and cities. For example, can a city prepare for war by securing necessities such as food, water, and other resources, or must it improvise as conditions deteriorate? How can city leadership protect human and animal life while under attack? How can a population adjust to a wartime footing in general? Is it possible to deal with the physical destruction of infrastructure within a limited time span? What are the emotional and psychological responses of the citizenry that shape the war experience?

These questions and others are to be understood within the context of World War II—an industrial-dependent, highly mechanized, aerial-influenced, massively human-scaled event—covering five or more years, and ranging over several oceans and continents. Because of the nature and intensity of the war, were preparations possible and to what degree could cities avoid destruction, given their central place in war strategy?

Adding to the complexity of the war and its many effects is the great disparity in impacts even within the war zones themselves. Wide swaths of Europe and Asia were overwhelmed by soldiers and machines, but even there most of Scandinavia and even parts of the United Kingdom were untouched by combat. The same goes for parts of Asia and the Middle East, much of Africa, and all of North and South America. But the question remains: Were cities which sustained some or no physical destruction spared the repercussions of war? We know what happened in Hiroshima, Nagasaki, and Tokyo, but what about Yokohama, Osaka, Kyoto, or Kumamoto?

The question of resilience itself, so central to the themes of this book, has a universal as well as a more specific connotation. In one sense, the focus on resilience is a forward-looking, almost optimistic, tip of the hat to human survival in the wake of such catastrophe as war, and more typically speaks to the future. Can it be applied to the concurrent state of affairs as cities went through the wartime experience in real time? It also presumes that humans have the capacity to repair the damages wrought by war. Indeed, any of the memorials in the myriad of bombed cities throughout the war zone is a graphic reminder of the conflict. But if we were to stroll down the streets of Berlin, or Nuremberg, or London today, we might see some signs of wartime destruction (like the Kaiser Wilhelm Memorial Church in Berlin with its ruined West Tower), but otherwise we'd find thriving communities. The same might be said for Manila, Warsaw, or St. Petersburg (Leningrad).

To be further explored is the dystopian, and thus less optimistic, side of the assault on cities during World War II beyond the atomic bombings in Hiroshima and Nagasaki, and the firebombings in Hamburg. An appropriate question is: How did cities come out of the war? The apocalyptic despair of post-nuclear warfare widely represented in visions like those in films like *A Boy and His Dog* (1975) and books like Cormac McCarthy's *The Road* (2006) may be inappropriate in looking back at World War II beyond the obvious atomic events in Japan. But Kurt Vonnegut's *Slaughterhouse-Five* (1969) presents its powerful anti-war themes in the hellish terrain of Dresden, which was destroyed by "conventional" weapons. Hopelessness sometimes trumped resilience in cases like these.

That *The Resilient City in World War II* is so evocative to me, raising thunderously important questions about the impacts of war, makes it an important read. Its greatest contribution will be to prompt lively debates over very important questions.

PREFACE

This book is based on long-term research on the environmental history of war at the University of Turku in Finland and the University of Michigan in the United States. The roots of cooperation between us extend to August 2012 when the first international workshop on the environmental history of World War II was organized on Magpie Island in Helsinki, Finland. In this workshop, urban issues concerning, for example, the cities of Leningrad, Gdansk, London, and Helsinki were addressed and discussed. However, the resulting book, *The Long Shadows: A Global Environmental History of the Second World War* (Corvallis: Oregon State University Press, 2017), did not include any chapter specifically on urban issues. Although it is an independent collection of articles, this new book continues and extends the themes of the earlier book by (nearly) the same editorial team, and by focusing on urban areas provides a novel and fruitful perspective to the rapidly expanding research on the environmental history of World War II.

Why urban areas? Simple demographic facts make it clear that it is not possible to understand the environmental history of the greatest violent conflict in the history of Earth without paying serious attention to the fate and role of towns and cities. Already at the turn of the nineteenth and twentieth centuries the rapidly proceeding concentration of human population in cities was considered the most remarkable contemporary social phenomenon.¹ While in 1800 under 3 percent and 1900 about 18 percent of humans lived in cities, the proportion of the world population, which was about 2.3 billion in 1940, had increased to 25 percent. The industrialized regions were already urbanized: in North America 59 percent, in

Europe and Oceania 53 percent, in Japan 38 percent and in the Soviet Union 32 percent of the population was urbanized. By 1940, the number of multimillion cities (with 2.5 million inhabitants or more) outside Europe had grown to nine, while the number in Europe remained at four.² Urbanization still proceeds, especially in the developing countries, and according to the United Nations' estimate 68.4 percent of the human population will live in cities by 2050.³ Earth will become an urban planet.

From the perspective of military actions, the degree of urbanization was (and is) vitally important because it largely determined not only the geographical distribution of economic activities and thus resources of warfare of the nations involved in conflict, but also to some extent the targets of military offensives. Although attempts to include civilian populations in armed conflicts have a long history, total warfare gained unprecedented dimensions during World War II and was most severely manifested and experienced in the densely populated urban areas. The prewar urban growth had in many countries created a new spatial economic structure with clearly defined heartland (urban cores) and hinterland (or periphery) whose interaction could obviously be severely damaged by military actions.⁴ Urban warfare that devastated cities such as Stalingrad, Dresden, and Hiroshima represented some of the most sinister chapters in the history of World War II.

However, in spite of extensive or even catastrophic damage, life continued in its various forms in wartime cities. Our collection of essays has an explicit focus on the patterns of urban resilience, defined here as the wartime capacity of towns and cities to function and maintain realistic living opportunities for the urban population in spite of extreme hardship. Resilience means very practical things. In the Syrian Civil War, for example, in Aleppo, which has been called "Stalingrad of the Middle East" due to destructive urban warfare against ISIS, urban inhabitants have increasingly started to grow their own food.⁵ People have looked for alternatives for damaged urban infrastructure by means of decentralizing and improvising. In Deir ez-Zor, which became known as "Syria's Leningrad" because siege of both cities lasted about three years, and some other Syrian towns, alternative water supply networks, consisting mainly of newly dug public or private wells, or re-discovered old wells, have expanded. Due to the damage to central power plants and electrical grids, people have resorted to private or commercial diesel generators as well as car batteries. Alternative power sources, such as small-scale devices harnessing the

energy of wind and solar power, have also been constructed.⁶ Similarly, practical innovations were widespread during World War II. Perhaps it is worth taking a look at some previous practices in order to think creatively about how to arrange living in towns and cities during the coming wars and crises.

This book is the first attempt to synthesize the environmental impacts of World War II on urban areas. However, the challenge to triangulate urban history, environmental history, and military history is considerable, because despite being a turning point in global environmental history, World War II signified highly different issues for different kinds of towns and cities on various continents. In many cities life continued as before; some even benefited from warfare while others were almost entirely wiped out. Towns and cities were also in very different positions before, during, and after the war. Therefore we decided to focus in this book mainly on wartime experiences. As yet it is hard to draw any general conclusions on the urban environmental history of World War II. Nevertheless, in the Epilogue we address some main themes of the book in a wider framework. Urban resilience is today as important an issue as it was yesterday in Athens, Nanking, Freetown, Montevideo, or Tokyo.

The editorial quartet is grateful for the original grant from the Foundation for Baltic and East European Studies (Östersjöstiftelse) that laid the base also for this second publishing project. More specifically we would like to thank University of Turku and Pori University Center, Finland, for funds needed in revising language and the Degree Program of Cultural Production and Landscape Studies for providing research leave to edit the book manuscript. Above all we would like to thank the contributors for their excellent articles and the anonymous reviewers for their constructive comments. Finally, we would like to thank the staff of Palgrave Macmillan for their invaluable help and the editors of Palgrave Studies in World Environmental History for accepting our book in their distinguished series.

Helsinki, Finland
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 March 1, 2019

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NOTES

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SECTION I

Introduction



CHAPTER 1

Environmental History, the Second World War, and Urban Resilience

Simo Laakkonen

A SHOCK CITY

Suddenly the whole class jumped: with a metallic clang, a siren right over our heads rang out, or more like howled and roared. Its plaintive wail almost split our eardrums as it plunged down to the pits of our stomachs. We schoolchildren looked at each other. We looked at our teacher. She stared back, eyes big as plates, face white as a sheet. It was the second class of the day. We knew right then and there that something terrible was happening. We couldn't immediately put it into words. But gradually, as the frenzied cry of the alarm continued to rise and fall, our class acknowledged reality. "What's that? What on earth is that?" our teacher asked so softly we could barely hear her. "It's an air raid siren! The Russkis are coming," our class yelled as one. "IT'S WAR!"¹

For these Finnish schoolchildren, the war started as a surprise attack by the Soviet Union on November 30, 1939, when Soviet bombers appeared without warning in the skies over Helsinki and bombed Finland's capital.² The war that later came to be known as World War II came as a shock to millions due to its unprecedented scale but also due to the introduced new technologies, strategies, and tactics. People were shaken by the surprisingly

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quick advance of tanks and other land forces, the mass bombings of civilians, the annihilation of opponents by means of total war, and the merciless attitude toward the vanquished nations.³ It was in absolute terms the world's most destructive war, claiming approximately 50–70 million human lives, depending on the method of calculation. In addition, the war injured millions of people and other living creatures. It dramatically weakened opportunities for action in nature conservation, animal protection, and environmental protection during or after the war.⁴ Finally, World War II gave birth to the Cold War, which for half a century divided the world into competing socio-economic and military blocs that threatened to desolate planet earth with their arsenals of weapons of mass destruction.

However, from an urban point of view, World War II was and remains until today a paradox. In public imagination, this total global war was waged above all by omnipotent states and armies. Towns and cities were swept aside by military commanders into a marginal role; they were assigned the role of good servants, they were to be obedient and industrious, yet humble if not invisible. Even towns and cities where decisive operations or battles took place were generally regarded simply as battlegrounds, passive sites where external active forces clashed. And yet due to the industrial nature of modern warfare, state powers were completely dependent on the innovations, products, and services provided by the towns and cities. We argue that no other war in human history has been waged with such ferocity and devastation done *to cities, against cities, and in cities*.

Towns and cities were of crucial importance to warfare during World War II. The war was waged by the most urbanized and industrialized powers in the world, including the United States, Germany, United Kingdom, and Japan. University towns had a central role in research and development in all belligerent countries. War was waged in the air, on land, and on and under the seas by sophisticated machines fabricated by women and operated by men. Warfare between the major powers depended completely on the mass production of industrial products in towns and cities: Osaka, Detroit, and Essen are three of numerous examples. Consequently, the social and demographic impact of the war economy was significant in belligerent cities.

In the United States, for instance, the draft quickly depleted the American industrial labor force and provided for the first full employment after the Great Depression. At their peak, the armed services commanded 12,500,000 men. Industry needed to replace these employees and add another 6,000,000. In all, the war uprooted 15,000,000 male and female

defense workers and 16,000,000 servicemen in the United States only. While the war created some boomtowns on the coasts, to staggering environmental consequences, many towns and cities in the interior faced decreasing populations and reducing environmental stress.⁵ In the USSR, war devastated hundreds of towns and cities while evacuation of factories and millions of workers from the war zone created boom towns in the interior of the country, above all in the Ural region.⁶ In addition, it may be claimed that frontlines and fortresses provided with developed infrastructure including medical, postal, and even cultural services, and accommodating millions of men and hundreds of thousands of animals, could be conceptualized as a new urban form stretching over continents.⁷

Civilians and towns have always suffered from war. Yet World War II was the first war in which military strategies systematically aimed at and succeeded in devastating towns and cities and killing civilian populations on a massive scale. The first signs of the new strategy became apparent in the German air raids conducted on British towns during World War I, which killed around six hundred civilians. German air forces tested this new strategy more broadly during the Spanish Civil War, killing some thousands of defenseless urban inhabitants, and then launched it at full scale during its World War II attacks on Polish and British urban centers. The Japanese air force also adopted a strategy of terror bombing in China in the late 1930s and 1940s. The heavy bombers of the Allied forces, which had been planned before the war, bombed systematically towns and cities in Germany and Japan, killing 1.5 million civilian residents and seriously injuring more than 2 million. Millions were evacuated and another 16 million were made homeless.⁸

When military created urban firestorms, they took the power of nature into their own hands. On the night of February 13, 1945, over 90 percent of Dresden's historic beautiful city center was destroyed and about 25,000 people were killed. Not only the inhabitants of the city suffered of the incendiary bombings but also Allied prisoners of war. London-born paratrooper Victor Gregg was taken as a prisoner and put to compulsory work. He was later caught sabotaging a factory and was sent for execution in Dresden on the very day that the air raid began: "I had been through six years of war," recollected the 95-year-old veteran when he was interviewed. "I've lost all but three of the 28 blokes who I joined up with in 1937. But nothing prepared me for seeing women and children alight and flying through the air. Nothing prepared me for that." Gregg said that it took him 40 years to get over that "evil" night.⁹ The angel that miraculously

remained standing on the roof of the city hall of Dresden became a black angel.

It was by no means an accident that the atom bombs were dropped on cities, too. Therefore, the home front—or should we rather say the new urban frontline—needs to be taken into account in order to understand the fundamentally urban nature of World War II. Needless to say, the planners of World War III (all of whom represented the winners of World War II) aimed at completing this twentieth-century strategy of urban terror by relying almost exclusively on air raids and the annihilation of major urban centers and civilian populations of the opposing military alliances. The drone war in the Middle East is just the most recent example of this strategic continuum.

To conclude, World War II (and other wars) could be described as a series of shocks consisting of the fear of war, the onset of war, acts of war, and also of the cessation of war, and then the unforeseeable post-war consequences. We will therefore use the concept of *shock city* to explore the multidimensional environmental crises that World War II signified for towns and cities, above all in Europe and Asia.¹⁰ The concept of shock city enables us to assess and compare the different impacts of war on both urban societies and environments.

A MODEL CITY

In the end, World War II was not only a military shock but an economic, social, political, and cultural one as well. Urban populations, institutions, infrastructures, and environments were heavily modified by war. Yet, conceptualizing war as a destructive shock alone would generate a biased impression of the relationship between the urban and natural worlds. In addition to the wails of alarms, other voices could also be heard in towns and cities, especially at the end of war: “Streets like these; warehouses rising above endless rows of hideous houses, factories built over gardens, no space for playgrounds, churches tucked away behind railway arches – streets like these must have no place in the post-war Britain. Homes that were built without thought of consequences are even worse than fire-bombs or high explosives.”¹¹

These were the opening words of a propaganda film entitled *Model City* issued by the Ministry of Information in Britain at the end of World War II. The commentary repeatedly announced that profound reforms “must be realized” in post-war Britain in order to provide a healthy and pleasant

city with sufficient open space, trees, gardens, and sunlight for everyone. The message of the film was explicit. The new model city was to be a just and democratic city for all the inhabitants—and it had to be realized promptly. The wartime coalition government established in Britain in 1940 had understood that in order to win the war against Germany, the socially deeply stratified British society had to be radically reformed in order to make it worth defending. Political democracy was not enough if it did not deliver well-being. Consequently, the socio-economic outlines of this better society were rapidly laid out and agreed upon during the Blitz. Hence, every German bomb dropped on British towns and cities was a vote for a profound political change that finally broke down the pre-war class barriers. By December 1942, a report commonly known as the “Beveridge Report” recommended that the government should provide adequate income, health care, education, housing, and employment for all—after the war. Because most Britons were urban residents, towns and cities had a central place in these plans for a new society. In brief, the planned model city was an expression of this politically radical version of a new model society: the welfare state. The future model city was to provide a concrete reward for the defenders of the isles, a better society in which to work and live in the brave new post-war world—something that differed completely from the pre-war society.

However, wartime planning of this model city was not solely limited to socio-economic reforms. In the summer of 1943, an extensive survey was completed of the city of Hull, a port city in Yorkshire, which was considered to be “an example of a blitzed town.” In addition to socio-economic issues, this study included ample amounts of information on and maps of, for example, outdoor leisure facilities and sites of cultural and historical importance, classifications of landscape types, the availability of open spaces, soil conditions, sewers, and watercourses, energy infrastructure, and areas affected by smoke pollution. Even the main sources of noise pollution throughout Hull were located on the survey. The Hull Regional Survey was completed to provide “a local and national model” for planning post-war reconstruction of urban nature and landscapes and the protection of urban soil, waters, and air. This showed that not only the urban society and the built environment but also urban nature and environment had to be reconsidered in the future model city, the *City of Tomorrow*.¹²

Due to the new ethos of the public good and the increased powers of the public authorities, new plans to protect urban nature were launched during and after the war. Also new nature conservation organizations were

established in towns and cities, and urban inhabitants joined them during the war more actively than during peacetime.¹³ Hence, it is helpful to address the concept of a *model city* as well in order to understand the revolutionary nature of wartime political developments and related post-war urban reforms.

RESILIENT CITY

The conflicting concepts of shock city and model city provide a common yet ambiguous framework for exploring the multifaceted urban environmental history of World War II. These coupled concepts emphasize that, in addition to being a destructive process, war promoted genuine progress. Hence, the concept of model city provides an unexpected but fruitful angle for exploring the different dimensions of war as a socio-environmental urban agent. It offers fruitful insights for discussing the impacts of war on the concepts of shock city and model city because World Wars represent concrete examples of the “paradox of progress” that the urban-industrial era has signified in world history. If the term used by Karl Marx and Joseph Schumpeter is adopted, war could be conceptualized as a distinctive form of creative destruction that incessantly revolutionizes the social structure from within, incessantly destroying the old one, incessantly creating a new one.¹⁴ Consequently, shock city and model city are best understood as complementary and not contradictory images of a complex and integrated process.

However, as a rule even the most hard hit towns and cities, including such extreme cases like Hiroshima, Chongqing, Stalingrad, and Dresden, survived wartime destruction, recovered gradually, and flourish today. Consequently, while the concepts of shock city and model city are used to make sense of the relationship between war, cities, and the urban environment, the key concept of this book is *resilient city*.¹⁵ Urban resilience refers here to the capacity of towns and cities to function and provide realistic living opportunities to their inhabitants no matter what adversities they encounter. Resilience depends on the capacity of city inhabitants (both human and non-human), communities, institutions, and infrastructure to face man-made and/or natural stress or shocks.¹⁶ This variation of urban socio-environmental resilience in wartime, place, and contents is the key concept of this volume.

WHAT IS THE PLACE OF THE CITY AND WAR IN ENVIRONMENTAL HISTORY?

On an international level, the impacts of the war on the urban environment were massive and highly diverse, if not downright contradictory.¹⁷ Roger W. Lotchin described the circumstances of American cities in his presidential address at a meeting of the Urban History Association: “Although we know from the experience of Los Angeles that the war actually created the smog problem there, few studies of war and the environment exist. Yet the war poured tons of pollutants into the atmosphere and into the waterways. By 1945, places like Pittsburgh and the other Ohio and Mississippi River cities had so much smoke in the air that they had to turn the streetlights on at noon, dust bowl style. At war’s end, the L.A. area found its beaches polluted, as were those of the city of St. Francis. And the conflict exerted tremendous pressures on the wood and mineral products of the nation as the war’s voracious appetite for housing, tanks, ships, and planes grew ever greater. The pressure on species and nonrenewable resources must have been enormous. Yet this process does not seem to interest environmental or any other historians.”¹⁸

Such examples inspire the posing of broader questions. What were the actual impacts of World War II on the urban environment and related ideas and practices? What kinds of solutions were proposed and adopted to assuage the difficult wartime and post-war situations? What were the potential short-term and long-term, positive and negative impacts of the war on the wartime and post-war urban environments? And, from a contemporary socio-ecological point of view, could shock cities during World War II have become in some way model cities? Could these wartime towns have some implications for the peacetime urban worlds of today as we seek the sustainable model cities of the future?

The impact of World War II on the environment in general and the urban environment in particular has been rarely addressed in historical studies conducted to date. The main reason for this neglect may be found in the historiography of environmental history studies. When the field emerged in the late 1970s in the United States, most studies focused on the wilderness and the expansion of agriculture, nature protection movements, and national parks.¹⁹ In wilderness-deficit Europe studies focused on the countryside. In France, studies addressed rural history and peasants. In the United Kingdom, studies focused on picturesque landscapes and gardens. In Germany, the cultural history of the landscape, *Landschaft*,

was of great importance.²⁰ In the northern regions of the continent, Scandinavia and Russia, forests and related debates were addressed instead.²¹ In the colonial world, forests and plantations were central themes of the first wave of environmental history studies.²² All of these studies were of high importance during the early years of environmental history. Gradually, however, scholars also started to ask what the role of the city, of urban-industrial environmental problems, was in studies of environmental history.

Urban-industrial environmental histories developed as the second wave of environmental history studies. In the United States, pioneers like Martin Melosi, Christine Rosen, and Joel Tarr addressed the importance of cities in understanding the development of the modern environmental discourse and focused on urban infrastructures and the related pollution issues.²³ In addition to studies on specific themes, holistic studies on the environmental history of a single city have been conducted on several North American urban centers.²⁴ Peter Brimblecombe, Bill Luckin, and Christopher Hamlin initiated studies on infrastructure and pollution in European cities.²⁵ Yet the only non-North American city to date that has been the subject of an extensive city-specific study is Helsinki.²⁶ Studies on the history of urban nature, open spaces, and town planning have developed recently on both continents. William Cronon integrated cities and their hinterlands in his influential study of Chicago.²⁷ The publication of several edited books²⁸ and special issues²⁹ on urban environmental history show the importance of international cooperation in developing the field.

While environmental studies explored the wilderness, the countryside, and the cities, some scholars started to concentrate on contextual changes that affected all of these elements. This was partly because most studies on the history of nature conservation and environmental protection have focused on peacetime developments. Consequently, increasing attention has recently been paid to the role of war and mass violence in environmental changes.³⁰ The emphasis on the contextual impact of environmental changes could be defined as one novel element in the current third wave of environmental history studies.

Studies on the environmental history of warfare now make up a rapidly growing international field. But this new area of investigation seems to some extent mimic previous waves of environmental history studies. Above all, scholars have addressed the American Civil War, the Vietnam War, and the Gulf Wars,³¹ while relatively little attention has been paid to the World Wars.³² Also, most studies on the environmental history of war