First published 2018 by Routledge 2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge 711 Third Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

© 2018 selection and editorial matter, Jeremy L. Caradonna; individual chapters, the contributors

The right of Jeremy L. Caradonna to be identified as the author of the editorial material, and of the authors for their individual chapters, has been asserted in accordance with sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this book may be reprinted or reproduced or utilized in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

Trademark notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data Names: Caradonna, Jeremy L., 1979- editor.

Title: Routledge handbook of the history of sustainability / edited by Jeremy L. Caradonna.

Other titles: Handbook of the history of sustainability

Description: Abingdon, Oxon; New York, NY: Routledge, 2018. | Includes

bibliographical references and index.

Identifiers: LCCN 2017020061 (print) | LCCN 2017044513 (ebook) | ISBN

9781315543017 (eBook) | ISBN 9781138685796 (harback)

Subjects: LCSH: Sustainability--History. | Sustainability--Case studies.

Classification: LCC GE195 (ebook) | LCC GE195 .R679 2018 (print) | DDC

338.9/27--dc23

LC record available at https://lccn.loc.gov/2017020061

ISBN: 978-1-138-68579-6 (hbk) ISBN: 978-1-315-54301-7 (ebk)

Typeset in Bembo by FiSH Books Ltd, Enfield

CONTENTS

List of illustrations		V111
Li	st of contributors	х
PA	RT I	
In	Introduction	
1	Introduction to the volume Jeremy L. Caradonna	3
	RT II	_
Hi	storiography of sustainability	7
2	Sustainability: a new historiography Jeremy L. Caradonna	9
	RT III	
Su	stainability, resilience, and collapse in historical societies	27
3	What is sustainable? Some views from Highlands Papua New Guinea Andrew Strathern and Pamela J. Stewart	29
4	Understanding sustainability through history: resources and complexity Joseph A. Tainter	40
5	The ancient Maya: sustainability and collapse? B. L. Turner II	57

	,, 8	
6	Sustaining what? Scarcity, growth, and the natural order in the discourse on sustainability, 1650–1900 Gareth Dale	71
7	Eternal forest, sustainable use: the making of the term "Nachhaltig" in seventeenth- and eighteenth-century German forestry Ulrich Grober	90
8	The Industrial Revolution: social costs and social change Emma Griffin	106
9	Islam and sustainability: the norms and the hindrances Tarik Masud Quadir	120
	T V e recent history of sustainability	135
10	The US environmental movement of the 1960s and 1970s: building frameworks of sustainability Erik W. Johnson and Pierce Greenberg	137
11	Sustainable development and the United Nations Iris Borowy	151
12	The growth paradigm: history, hegemony, and the contested making of economic growthmanship Matthias Schmelzer	164
13	A basis for systemic sustainability measurement: an update Simon Bell and Stephen Morse	187
14	Sustainability and the reframing of the world city Stephen Zavestoski	219
15	Sustainable transportation: from feet to wheels and machines and back to feet Preston L. Schiller	233
16	From hydrology to hydrosociality: historiography of waters in India Jenia Mukherjee	254

Contents

17	Sustainable architecture: a short history Vandana Baweja	273		
18	Sustainability studies in higher education Teresa Sabol Spezio	296		
PART VI				
Co	re issues and key debates on sustainability	303		
19	Climate change and its histories Hervé Le Treut and Claire Weill	305		
20	The problem of economic growth Richard Heinberg	322		
21	From (strong) sustainability to degrowth: a philosophical and historical reconstruction Barbara Muraca and Ralf Döring	339		
22	Sustainability beyond growth: toward an ethics of flourishing John R. Ehrenfeld	363		
23	Business, sustainability, and the bottom of the pyramid Ana Maria Peredo	375		
24	At the crossroads: sustainability and the twilight of the modern world John A. Robinson and David Maggs	387		
25	Rethinking the history of agriculture with sustainability in mind Jeremy L. Caradonna	404		
26	The gene revolution and the future of agriculture Thierry Vrain	409		
Ind	Index			