

Subject Guide

Systems and Infrastructure

Urban Systems

Urban systems are geographical areas with a high concentration of human activity and interactions, embedded within multiscale inter-dependent social, engineered, and natural systems that impact human and planetary wellbeing across spatial (local to global) and temporal scales.

Sustainable urban systems (SUS) are those that are transforming their structures and processes with the goal of measurably advancing the well-being of people and the planet (Advisory Committee for Environmental Research and Education, 2018).

Purchase recommendation

E-Resources and Catalogues

Library catalogue: Books, maps and films are searchable here, does not include electronic databases and journals

Google Scholar: Functions as a literature database of journal articles and books

Google Books: A source to search and preview books in copyright and read out-of-copyright books

WorldCat: A source for searching reading resources of more than 10,000 libraries worldwide

National Digital Library of India: A virtual repository that provides a host of services for the learner community

Digital South Asia Library: A joint project by the University of Chicago and the Centre for Research Libraries which provides digital materials on South Asia

Theses. Shodhganga at Infflibnet has more than 3 lakhs of graduate theses published in India, [subject categories can be browsed here](#)

Google Advanced Search: For performing an advanced search about web pages, files, images, videos, and books on Google.

Reference and Online Resources

The Office Dictionary of the Ministry of Housing and Urban Affairs: Defines key terms of housing and urban concepts, available in English and Hindi

City Design Glossary: A glossary compiled by The Mayors' Institute of City Design and National Trust for Historic Preservation on city design

Water and Sanitation Glossary: A glossary is compiled by the Tamil Nadu Urban Sanitation Support Programme (TNUSSP)

Subjects: Settlement planning, energy, environmental services, urban transportation and mobility

Tags: Cities, planning, transportation, energy, infrastructure, smart cities, solid waste management, water, sustainable cities, architecture, urban systems, disaster risk reduction, Urban farming

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Last updated: 20-02-2023

Short Glossary on the Human Right to Water and sanitation:

Offered by UN-Water Decade Programme on Advocacy and Communication (UNW-DPAC)

Glossary of Land Record Terms: A glossary offered by Charleston County Public Library

Energy Glossary: A glossary by the U. S. Energy Information Administration

Water Glossary: A glossary on water-related issues by Lenntech

Understanding the Basics of Land Use and Planning: A glossary by The Institute for Local Government, Sacramento, CA

Glossary of Ecosystem Terms: A glossary of ecosystem management terms by Waterquality.de

Google Earth: A computer program that renders the earth on a 3D globe by using satellite imagery

Google Maps: A web mapping service by Google, that offers imagery, photography and maps

Datasets and Maps

UN-Habitat Open Data: A compilation of urban indicators data

Sustainable Healthy Cities: Data Sets that provide data on urban areas' energy consumption across 640 Indian districts for the year 2011

Global Change Information System: Connecting global change: Resources that provide access to datasets on various disciplines

Land Datasets: Spatial and statistical data on natural resources offered by the Land Portal Foundation

WATERS Geospatial Data: Geospatial datasets by the United States Environmental Protection Agency

Water Resources Maps: Various spatial products by USGS: Science for a Changing World

Water Resources Data and Tools: Water information provided by USGS: Science for a Changing World

WRI Data: Datasets on water resources by the World Resources Institute

Global Waters Datasets: Datasets for water development practitioners

Data.gov Datasets: Datasets on water resources, ecosystem services and climate change

India Maps (General Public), Free to Download Maps, and Online Maps Portal (Free/ Purchase) by Survey of India, Department of Science and Technology, Government of India. **SDG Gateway Data Explorer** and **Country SDG Profiles** by Economic and Social Commission for Asia and the Pacific (ESCAP).

Databases

CapEx: It is a database of projects with new capacities in India, aggregated across industries, which helps in developing current and future business prospects

UN Global SDG Indicators Database: A global SDG indicators database and review of the 2030 Agenda for Sustainable Development

IEA Energy Statistics: Statistics on world energy markets ranging from oil to renewals, sectoral analyses of markets, technologies and policies

Social Science Research Network: An e-Library that provides 9,50,733 research papers from more than 60 disciplines.

Water Engineering and Development Centre: Offers journal papers, books, manuals, illustrations, guides, factsheets, videos, animations, conference papers and posters on water engineering and development.

Journal Articles

- [Cities: The International Journal of Urban Policy and Planning](#)
- [City and Environment Interactions: Climate – Sustainability – Resilience](#)
- [Climate Services](#)
- [Computers, Environment and Urban Systems](#)
- [Ecosystem Services: Science, Policy and Practice](#)
- [Environment and Urbanization](#)
- [Environment and Urbanization Asia](#)
- [Global Environmental Change](#)
- [International Journal of Urban Sustainable Development](#)
- [Journal of Advance Transportation](#)
- [Journal of Landscape Architecture](#)
- [Journal of Resources, Energy and Development](#)
- [Land Use Policy](#)
- [Landscape and Urban Planning](#)
- [Planning Theory](#)
- [Remote Sensing Applications: Society and Environment](#)
- [TOPOS: the International Review of Landscape Architecture and Urban Design](#)
- [UCL Open: Environment Preprint](#)
- [Urban Climate](#)
- [Urban India](#)
- [Sustainable Development](#)
- [Journal of the American Planning Association](#)
- [Town Planning Review](#)
- [Journal of Regional and City Planning](#)
- [Journal of Planning Education and Research](#)

To learn more, visit Google Scholar rankings of **Urban Studies & Planning** and **Sustainable Development** highly cited journals.

Additionally, visit the IIHS **Library Journals webpage** to access the journals the library has subscribed to.

Also, on water and supply check **Open access books** from Practical Action Publishing.

Working Papers

Berkeley Program on Housing and Urban Policy: Working papers on urban development and policy

Transport Studies Unit: Working papers from TSU, Oxford University Centre for the Environment, University of Oxford, UK

Mobility and Congestion in Urban India: by Akbar, Protttoy Aman., Couture, Victor., Duranton, Gilles., Ghani, Ejaz., and Storeygard, Adam.

IURD Working Paper Series: Open access working papers offered by the Institute of Urban and Regional Development, University of California

ITS Berkeley: Open access working papers are offered by the Institute of Transportation Studies at the University of California

Public-Private-People Partnerships in urban planning: Offered by the Baltic Urban Lab project (Central Baltic INTERREG)

Centre for Urban Studies Working Paper Series: A series offered by the Centre for Urban Studies, University of Amsterdam

Cities Working Papers: Working papers from The New Climate Economy: The Global Commission on the Economy and Climate

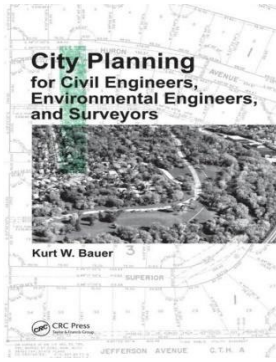
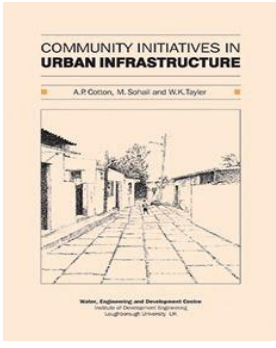
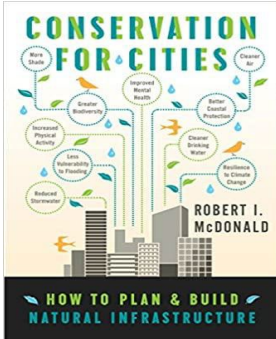
Research in Environmental Economics - NCEE Working Paper Series: Working paper series on environmental economics by the United States Environmental Protection Agency.

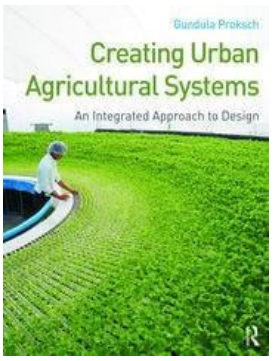
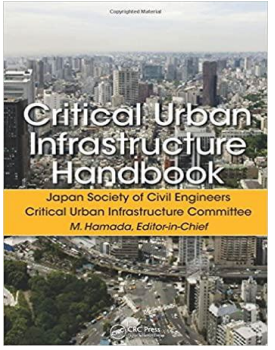
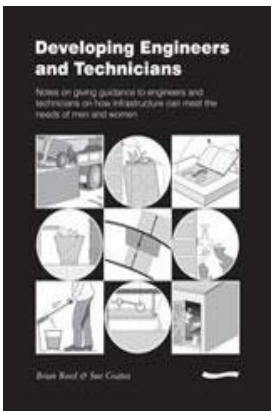
Environment Working Papers: Selected studies on environmental issues from the OECD Environment Directorate

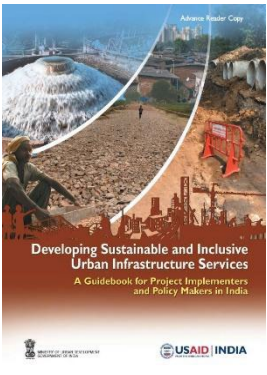
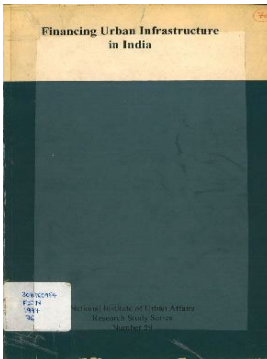
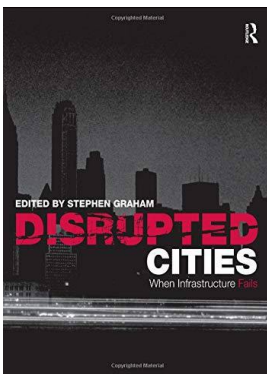

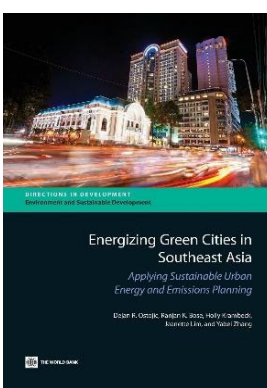
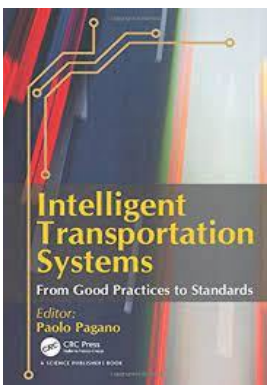
India's Energy and Emissions Outlook: Results from India Energy Model: Working papers by the Energy, Climate Change and Overseas Engagement Division, NITI Aayog

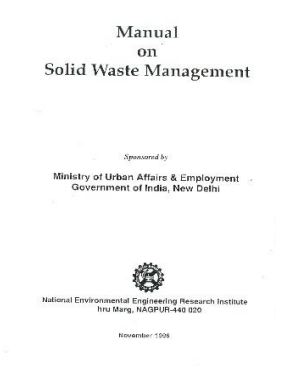
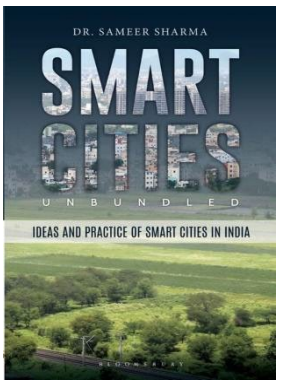
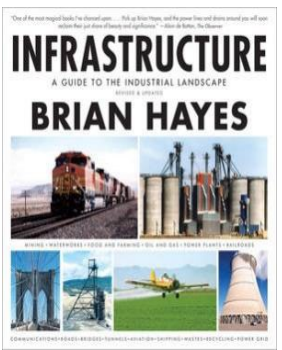
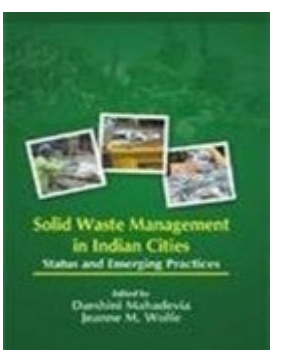
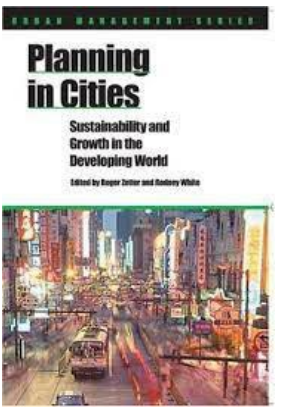

SD Working Paper Series: Working papers from the Economic and Social Commission for Asia and the Pacific (ESCAP)

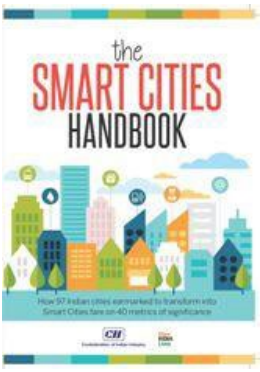
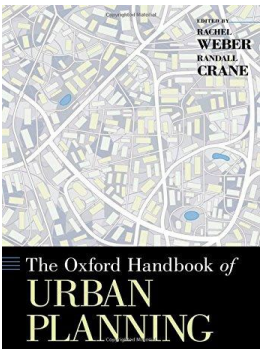
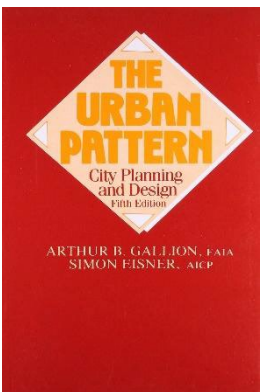
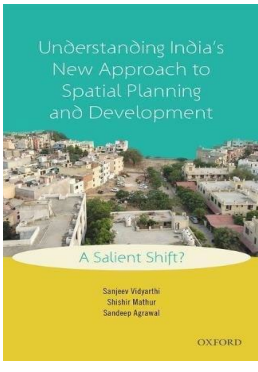
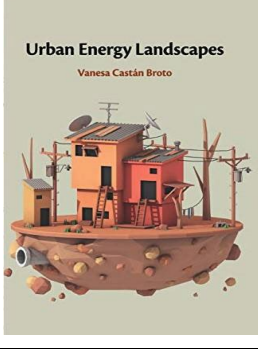
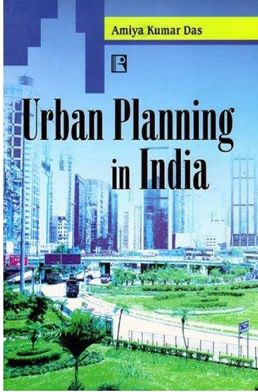
Books and e-books

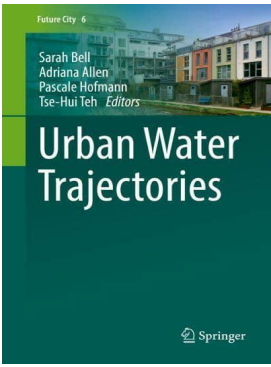
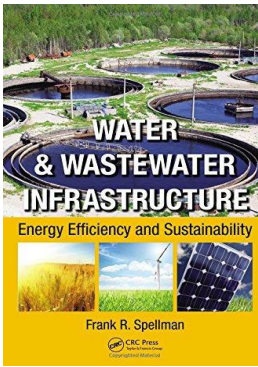
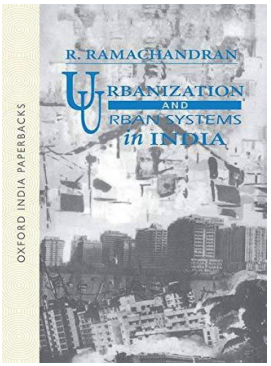
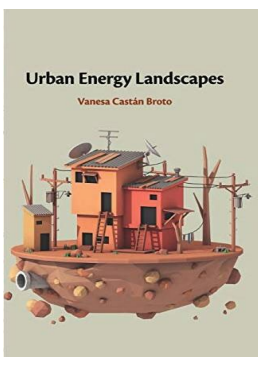
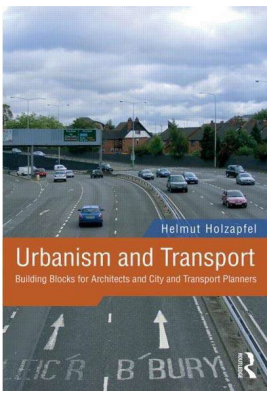
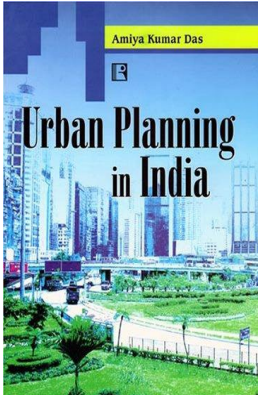
	<p>City Planning for Civil Engineers, Environmental Engineers, and Surveyors by Kurt W. Bauer.</p> <p>Call Number: 307.1216 BAU 002927 ISBN: 9781439808924 Publication Date: 01-2018</p>
	<p>Community Initiatives in Urban Infrastructure by Andrew Cotton.</p> <p>Call Number: 307.120954 COT 000171 ISBN: 0906055563 Publication Date: 01-1998</p>
	<p>Conservation for Cities: How to Plan and Build Natural Infrastructure by Robert I. McDonald</p> <p>Call Number: 307.76 MCD 008430 ISBN: 9781610915229 Publication Date: 10-2015</p>

	<p>Creating Urban Agricultural Systems: An Integrated Approach to Design by Gundula Proksch</p> <p>Call Number: 630.1732 PRO 016951 ISBN: 9780415747936 Publication Date: 11-2016</p>
	<p>Critical Urban Infrastructure Handbook edited by M. Hamada and others</p> <p>Call Number: 624.091732 CRI 010784 ISBN: 9781466592049 Publication Date: 12-2014</p>
	<p>Developing Engineers and Technicians: Notes on giving guidance to engineers and technicians on how infrastructure can meet needs of men and women by Brian Reed and Sue Coates</p> <p>Call Number: 620.0068 REE 008201 ISBN: 9781843801108 Publication Date: 01-2007</p>

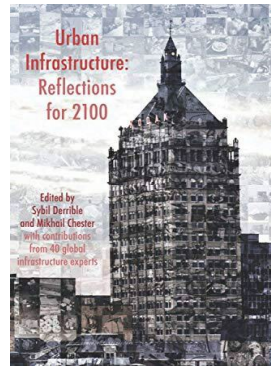
	<p>Developing Sustainable and Inclusive Urban Infrastructure Services: A Guidebook for Project Implementers and Policymakers in India by TCG International</p> <p>Call Number: 363.60954 DEV 000887 Publication Date: 2011</p>		<p>Financing Urban Infrastructure in India: Prepared for the urban sector profile project of the Asian Development Bank, Manila, Philippines by National Institute of Urban Affairs</p> <p>Call Number: 307.760954 FIN 000076 Publication Date: 1997</p>
	<p>Disrupted Cities: When Infrastructure Fails edited by Stephen Graham</p> <p>Call Number: 363.34 GRA 011930 ISBN: 9780415991797 Publication Date: 09-2009</p>		<p>Green Infrastructure: A Practitioner's Guide by Bhitush Luthra and others</p> <p>Call Number: 635.965 GRE 011560 Publication Date: 2017</p>
	<p>Energizing Green Cities in Southeast Asia: Applying Sustainable Urban Energy and Emissions Planning by Dejan Ostojic and others</p> <p>Call Number: 333.7940959091732 OST 004563 ISBN: 9780821398371 Publication Date: 10-2013</p>		<p>Intelligent Transportation Systems edited by Paolo Pagano</p> <p>Call Number: 388.312094 INT 010627 ISBN: 9781498721868 Publication Date: 09-2016</p>

 <p>Manual on Solid Waste Management</p> <p>Sponsored by Ministry of Urban Affairs & Employment Government of India, New Delhi</p> <p>National Environmental Engineering Research Institute Hauz Khas, New Delhi 110 028</p> <p>November 1996</p>	<p>Manual on Solid Waste Management by Ministry of Urban Affairs & Employment Government of India</p> <p>Call Number: 363.7282 MAN 004947 Publication Date: 1996</p>	 <p>DR. SAMEER SHARMA SMART CITIES UNBUNDLED IDEAS AND PRACTICE OF SMART CITIES IN INDIA</p>	<p>Smart Cities Unbundled: Ideas and Practice of Smart Cities in India by Sameer Sharma</p> <p>Call Number: 307.760954 SHA 009541 ISBN: 9789387863040 Publication Date: 06-2018</p>
 <p>One of the most magical books I've discovered... Pick up Brian Hayes, and the power lines and steam pipes you will meet when they get down to earth and to the ground - other in terms, the power lines.</p> <p>INFRASTRUCTURE A GUIDE TO THE INDUSTRIAL LANDSCAPE BRIAN HAYES</p> <p>Images: COURTESY OF THE INDIA INFRASTRUCTURE DEVELOPMENT CORPORATION (IIDCL) AND THE INDIA INFRASTRUCTURE DEVELOPMENT CORPORATION (IIDCL)</p>	<p>Infrastructure: A Field Guide to the Industrial Landscape by Brian Hayes</p> <p>Call Number: 711.6 HAY 001618 ISBN: 9780393059977 Publication Date: 11-2005</p>	 <p>Solid Waste Management in Indian Cities Status and Emerging Practices Edited by Darshini Mahadevia Jeanne M. Wolfe</p>	<p>Solid Waste Management in Indian cities: Status and Emerging Practices edited by Darshini Mahadevia and Jeanne M. Wolfe</p> <p>Call Number: 363.72850954 SOL 001491 ISBN: 9788180695223 Publication Date: 12-2008</p>
 <p>Planning in Cities Sustainability and Growth in the Developing World Edited by Roger Zetter and Rodney White</p>	<p>Planning in cities: Sustainability and Growth in the Developing World by Roger Zetter, Rodney R. White, and Lesley Downing</p> <p>Call Number: 307.1216091724 PLA 001735 ISBN: 9781853395437 Publication Date: 12-2002</p>	 <p>Strategies for Sustainable Architecture Paola Sassi</p>	<p>Strategies for Sustainable Architecture by Paola Sassi</p> <p>Call Number: 330.954 NIL 010069 ISBN: 9780670087891 Publication Date: 11-2015</p>

	<p>The Smart Cities Handbook by Confederation of Indian Industry</p> <p>Call Number: 307.760954 SMA.R 008560</p> <p>Publication Date: 2015</p>
	<p>The Oxford Handbook of Urban Planning by Randall Crane and Rachel Weber</p> <p>Call Number: 307.1216 OXF 001102</p> <p>ISBN: 9780195374995</p> <p>Publication Date: 06-2012</p>
	<p>The Urban Pattern: City Planning and Design by Arthur B. Gallion</p> <p>Call Number: 711.4 GAL 012791</p> <p>Publication Date: 1950</p>
	<p>Understanding India's New Approach to Spatial Planning and Development: A Salient Shift? By Sanjeev Vidyarthi and others</p> <p>Call Number: 307.120954 VID.Y 010975</p> <p>ISBN: 9780199472642</p> <p>Publication Date: 05-2017</p>
	<p>Urban Energy Landscapes by Vanesa Castán Broto</p> <p>Call Number: 333.7913091732 BRO 013802</p> <p>ISBN: 9781108419420</p> <p>Publication Date: 04-2019</p>
	<p>Urban Planning in India by Amiya Kumar Das</p> <p>Call Number: 307.12160954 DAS 009619</p> <p>ISBN: 9788131600948</p> <p>Publication Date: 01-2007</p>

	<p>Urban Water Trajectories by Sarah Bell</p> <p>Call Number: 363.61 URB 009727 ISBN: 9783319437910 Publication Date: 11-2016</p>		<p>Water & Wastewater Infrastructure: Energy Efficiency and Sustainability by Frank R. Spellman</p> <p>Call Number: 628.10286 SPE 007668 ISBN: 9781466517851 Publication Date: 03-2013</p>
	<p>Urbanization and Urban Systems in India by R. Ramachandran</p> <p>Call Number: 307.760954 RAM. A 010882 ISBN: 9780195629590 Publication Date: 06-1997</p>		<p>Urban Energy Landscapes by Vanesa Castan Broto</p> <p>Call Number: 333.7913091732 BRO 013802 ISBN: 9781108419420 Publication Date: 04-2019</p>
	<p>Urbanism and Transport: Building Blocks for Architects and City and Transport planners by Helmut Holzapfel</p> <p>Call Number: 713.0943 HOL 007692 ISBN: 9781138798182 Publication Date: 02-2015</p>		<p>Urban Planning in India by Amiya Kumar Das</p> <p>Call Number: 307.12160954 DAS 009619 ISBN: 9788131600948 Publication Date: 01-2007</p>

	<p>Urban Water Trajectories by Sarah Bell</p> <p>Call Number: 363.61 URB 009727 ISBN: 9783319437910 Publication Date: 11-2016</p>
	<p>Wicked Philosophy: Philosophy of Science and Vision Development for Complex Problems by Coyan Tromp</p> <p>Call Number: 303.483 TRO 016258 ISBN: 9789462988774 Publication Date: 08-2018</p>
	<p>Sustainability Assessment of Urban Systems edited by Claudia R. Binder, Romano Wyss, and Emanuele Massaro</p> <p>Call Number: 307.1416 BIN.D 017354 ISBN: 9781108471794 Publication Date: 03-2020</p>

	<p>Urban Infrastructure: Reflections for 2100 by Sybil Derrible and Mikhail Chester</p> <p>Call Number: 307.1216 DER 018261 ISBN: 9798695826524 Publication Date: 10-2020</p>
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Berkeley Lab offers useful resources on urban infrastructure.

Reports

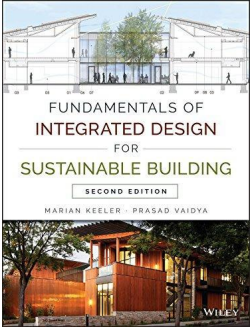
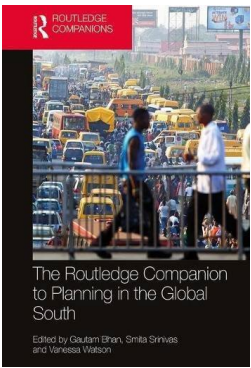
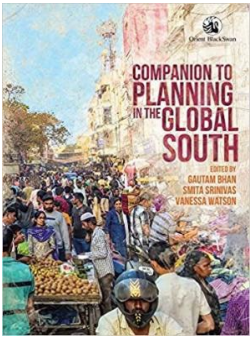
India Infrastructure Report 2018: Making Housing Affordable: A Supply Chain Reform Agenda for Urban India, June 2018

India Infrastructure Sector in India: Industry Report, October 2021

Sustainable Urban Systems: Articulating a long-term Convergence Research Agenda, January 2018

Industry and Infrastructure (Chapter 08), Volume 02, Economic Survey, 2020-21

Faculty Books and Reports

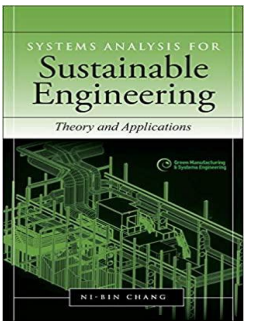
	<p>Fundamentals of Integrated Design for Sustainable Building by Marian Keeler and Prasad Vaidya</p> <p>Call Number: 720.47 KEE 015095 ISBN: 9781118881910 Publication Date: 06-2016</p>
	<p>The Routledge Companion to Planning in the Global South edited by Gautam Bhan, Smita Srinivas and Vanessa Watson</p> <p>Call Number: 307.1209724 ROU 014667 ISBN: 9781138932814 Publication Date: 09-2017</p>
	<p>Companion to Planning in the Global South edited by Gautam Bhan, Smita Srinivas and Vanessa Watson.</p> <p>Call Number: 307.1209724 COM 009625 ISBN: 9789352872930 Publication Date: 01-2018</p>

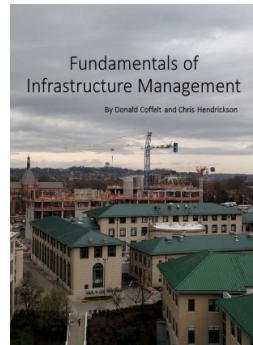
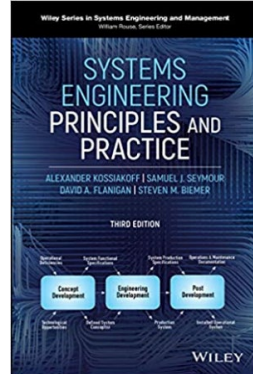
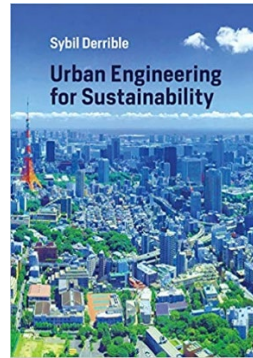
	<p>The state of Household Food Security in Bangalore, India by Jyothi Koduganti and others</p> <p>Call Number: 363.8095487 KOD 016167 ISBN: 9781920597412 Publication Date: 2019</p>
	<p>The Urban Food System of Bangalore, India by Aditi Surie and Neha Sami</p> <p>Call Number: 363.80954 SUR 011177 ISBN: 9781920597269 Publication Date: 2017</p>
	<p>Socio-economics of Urban heritage: IIHS Position Paper by Rohit Jigyasu, Garima Jain and Anushree Deb</p>

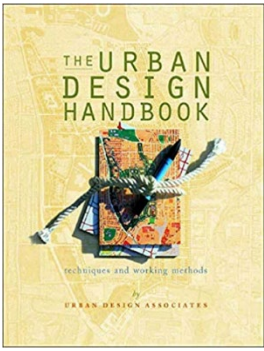
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Reference

Advisory Committee for Environmental Research and Education. (2018). [Sustainable urban systems: articulating a long-term convergence research agenda](#). a report from the NSF Advisory Committee for Environmental Research and Education. Prepared by the Sustainable Urban Systems Subcommittee.