

How Mandya Can Prevent Waste of One-third of Cauvery Water

Karnataka and Tamil Nadu have been at loggerheads over water sharing from Cauvery River for many decades. With reservoir levels dipping because of reduced flow from catchment areas the tension is expected to prevail and may even escalate in the coming years. While improving catchment area management is vital, it's also important to explore if water is not wasted due to poor water supply management. Mandya wastes one third and Bengaluru, nearly half of Cauvery water. Bosch, IBM & IISc are working on solutions to help Mandya save Cauvery water with Smart Grids

By **Benedict Paramanand**

Mandya has been the hotbed of tension because the decision of water sharing between the two states affects this district the most. The big question which the Karnataka government and the local farmers need to answer is – can they significantly cut down water consumption without affecting productivity? Should they explore a better mix of crops which could offer higher income to farmers and reduce water guzzling sugarcane and paddy?



TOP FEATURES

Books Critiquing Urban Water Supply Woes in India 4

NE Has Immense Renewable Energy Potential 10

Global Survey Finds NGOs Making Most Impact 11

TOP NATIONAL NEWS

Zubaida Bai Wins UN Corp Sustainability Award

India Ranks 110 in SDGs

Edible Packaging From Milk



TOP INTERNATIONAL NEWS

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DiCaprio Takes Climate Change Campaign to Presidential Elections



Special Issue Urban Water Supply

Books / Courses / Events



Confederation of Indian Industry
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Purpose: To excite Indian businesses, SMEs, executives and students about the immense business opportunity in not only adopting Sustainability as Strategy in their companies but also inspire them to the possibilities of a big market for innovative sustainability products and services.

Editor **Benedict Paramanand**

Editorial Advisors

Pradeep Kashyap
Founder & CEO, MART

Madan Padaki
CEO, Head Held High

Vasanthi Srinivasan
Faculty, IIM Bangalore

Uma Haridas
Editorial Coordinator

Rishabh Media Network
22, 1st A Main, G M Palya,
Bangalore - 560 075, India
Phone - 91 80 41126557/9880602275
benedict@managementnext.com
www.sustainabilitynext.in

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That's where Robert Bosch comes in. Bosch has been working on understanding the consumption pattern in the Cauvery belt, especially in Mandy since 2014. It has developed a new technology based on electrolysis for purifying ground water in the same region. **R K Shenoy, Senior VP, Robert Bosch Engineering & Business Solutions Private Limited**, says this "niche technology is at commercialization stage. Our objective is to work towards providing water to the consumers at an affordable price point and also enhance access to water to a wider base of consumers."



The groundwater in the Mandya-Mysore region is said to be contaminated with lead and arsenic. Bosch's nano-tech based purification technology is able to address this problem, he says. Bosch is also working on developing many technologies which has larger impact with several academic institutions especially the prestigious Indian Institute of Science (IISc), Bangalore.

Heavy water leakage from canals that carry Cauvery River, which flows about 40 kilometers along the historic town of Srirangapatna, is a big problem. Estimates suggest that 89 MLD (million liters a day) of water pumped from river Cauvery to Mandya city, about 29 MLD is lost due to leakages. To address this issue, The Robert Bosch Centre for Cyber Physical Systems (RBCCPS) at IISC is collaborating with IBM Bangalore to develop an instrument to automatically identify and localize leaks. This instrument will collect data of key hydraulics and water quality parameters.

This project started in 2014 and completes this year. Mandya could soon have cyber physical solutions for its water woes. This project is expected to be a test bed for research in 'Smart Water Grids, a prominent subset of the 'Smart City' concept.

Bengaluru is even worse. Its water board chairman T M Vijay Bhaskar said in August 2016 that out of the 1,400 MLD of Cauvery water pumped to the city, 600 MLD goes waste. The irony is, when the city is wasting this much water, a new project, Cauvery Fourth Phase, for 400 MLD is being planned. The global water waste ranges between 8% and 10% while India's was 15% overall.

The Robert Bosch Centre for Cyber Physical Systems (RBCCPS) at IISC is an inter-disciplinary research and academic center focused

on unearthing new knowledge in the science and engineering of cyber physical systems, via high impact research. It runs an interdisciplinary PhD program, supports masters' projects and offers courses in the domain of cyber physical systems. In addition, the center extends partial funding support to large collaborative, expedition style, research projects aimed at solving problems of great societal interest. The center also promotes collaboration between IISc faculties and other universities and companies. It was established in 2011 and is supported by a philanthropic grant by the Bosch Engineering and Business Solutions.

Shenoy says 'sustainability' at Bosch is part of its DNA and it doesn't need to make special efforts. Bosch's funds to IISc, at Rs. 11 crore a year, goes towards designing new technologies for fighting problems in healthcare, energy and water. The new excitement is because scientists are now able to apply the internet of things (IOT) and cloud technologies to solve problems.

Apart from smart water grids, Robert Bosch India (RBI) is ready with a new 'Micro Climate Monitoring System' for better air quality management in Indian cities. It has installed a few outside its office in Bangalore. This technology also doubles up as vehicle tracking devices which can help in better air quality management.

Academia – Lab collaboration

RBI works with more than 20 academic institutions in India currently to bridge the huge gap between academia and industry. Shenoy says that "Earlier we were involved only in designing curriculum, now, we are getting into the innovation part – working on concepts on how research can be done in the field." For example, RBI is currently working with NIT Suratkal on designing new energy solutions.

RBI has begun to install tools in the labs to conduct training to improve power tools, embedded systems and industrial automation. Skill development at vocational centers is another focus area. It does around 250 skill-training each year. Improving automotive electronics is its new focus area.

RBI is now working with other OEMs (original equipment manufacturers) and even competitors to target markets at price point that are affordable. It offers its labs for testing with the objective that "India can have end-to-end development and manufacturing capability of auto products." RBI's futuristic projects are on technologies for full electric and hybrid vehicles. It is working on making two-wheelers safer.

RBI is the backbone of Robert Bosch global for engineering and IT. More than 80 percent of the work done by 18,000 employees is for global projects. Robert Bosch has eight entities in India and RBI is one of them.

Encouraging Start-ups

Robert Bosch has caught on to the start-up wave to drive its future. It recently launched the Start Up Connect. It aims to mentor ten start-ups shortly. "We start with mentoring, and if we find them interesting, engage more to take it forward. Incubation, mentoring and look at eventually invest in a staged manner."

Globally Bosch has a venture capital which is currently active in China. It plans to focus on India next year. While Robert Bosch Venture Capital focuses on outside start ups with minority investment/stake, it has launched an internal start-up engine to encourage new products in-house with a start-up mindset.



Water Purification Plant at IISc

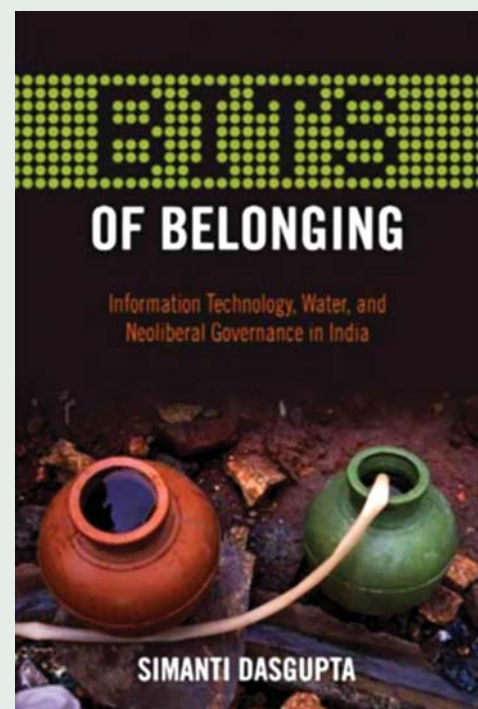
BITS of Belonging - Information Technology, Water, and Neoliberal Governance in India

By Simanti Dasgupta, Temple University Press, August 2016

The book is an ethnographic investigation of the class politics that underscore the emergence of neo-liberalism in urban India.

What links a water privatization scheme and a prominent software company in India's silicon city, Bangalore? The author's new book explores the way in which the corporate governance of IT is seen as a model for urban development in contemporary India. Through ethnographic research into both a water privatization scheme and the practices of an IT company, Dasgupta reveals the similarities that cross-cut both domains as new and old inequalities are produced. Rich in detail and fascinating in its analytical drive the book opens up new avenues for thinking about citizenship and belonging.

It is an engaging book that re-frames the widely studied field of IT in India in novel and interesting ways. Simanti Dasgupta offers new insights in her juxtaposition of IT and water distribution, and shows how neoliberal politics in India are deeply embedded in gender and caste hierarchies.



Cauvery water pipeline project



"BITS of Belonging is a very timely and important book, with significant theoretical insights and compelling data. Its critique of the rhetoric of IT leaders and professionals in India is rigorous. Dasgupta provides an exploration of lived experience of the IT boom for those on the ground in the city of Bangalore. Her analysis moves fluidly back and forth from slums and governmental water boards, to affluent IT firms and corporate parks. With a geographer's eye, she shows us firsthand the disconnect between these worlds—which are all affected by the IT boom—and it is extremely powerful."

—Winifred Poster, Washington University, St. Louis

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Pipe Politics, Contested Waters - Embedded Infrastructures of Millennial Mumbai

By **Lisa Bjorkman**, Duke University Press,
August 2016

Mumbai is in many ways the paradigmatic city of India's celebrated economic upturn, but the city's transformation went hand-in-hand with increasing water woes. The author, Assistant Professor of Urban and Public Affairs at the University of Louisville, moves from slums to elite enclaves in analyzing the processes of mapping and politics in the city's watery infrastructures.

Exploring the workings of secondary markets, water brokers, and planning offices she reveals how power, knowledge and authority over how when and why water flows are being reconfigured as Mumbai makes itself a "world class" city.

Winner of the 2014 Joseph W. Elder Prize in the Indian Social Sciences the book is both profoundly intimate in its ethnographic depth and wonderfully ambitious with its theoretical reach.

PIPE POLITICS, CONTESTED WATERS



Embedded Infrastructures of Millennial Mumbai **Lisa Björkman**



Zubaida Bai Wins UN Corp Sustainability Award

Zubaida Bai, the founder of 'ayzh', a for-profit social venture providing health and livelihood solutions using technology to impoverished women worldwide, was named among the 10 '2016 Global Compact SDG Pioneers', an initiative launched by the United Nations to search for "entrepreneurs" who can play a pivotal role.

The award selects 10 "champions and pioneers" under the world's largest corporate sustainability initiative that calls on companies to align with universal principles of human rights, environment and anti-corruption.



The UN Global Compact, the world's largest corporate sustainability initiative, supports companies to do business responsibly by aligning their strategies and operations with ten principles of human rights, labour, environment and anti-corruption; and to take strategic actions to advance broader societal goals, such as the UN Sustainable Goals with an emphasis on collaboration and innovation. The UN noted that trillions of dollars will be invested in infrastructure in the coming years and that the Paris Agreement and the SDGs give the private sector an unprecedented opportunity to create clean-energy, climate- resilient, sustainable economies.

Bai was brought up in Chennai. She had developed an infection after giving birth to her first child which "caused her to suffer for years." This inspired her to help rural women who needed access to healthcare. Bai was named a TED Fellow in 2009, an Ashoka Maternal Health fellow in 2010–2011, and an Echoing Green fellow in 2012. In 2011, her design for JANMA, a clean birth kit, was selected by INDEX Awards as one of 61 products "globally designed to improve life."

India Ranks 110 in SDGs

India was ranked a low 110 out of 149 nations assessed on where they stand with regard to achieving the Sustainable Development Goals, according to a new index which is topped by Sweden and shows all countries face major challenges in achieving these ambitious goals.

The Sustainable Development Solutions Network (SDSN) and the Bertelsmann Stiftung launched a new Sustainable Development Goal Index and Dashboard to provide a report card for tracking Sustainable Development Goals (SDG) progress and ensuring accountability.

The index collected available data for 149 countries to assess where each country stands in 2016 with regard to achieving the SDGs. It ranks countries based on their performance across the 17 global goals, a set of ambitious objectives across the three dimensions of sustainable development - economic development, social inclusion and environmental sustainability, underpinned by good governance.

The index helps countries identify priorities for early actions and shows that every country faces major challenges in achieving the SDGs.



EDIBLE FOOD PACKAGING CREATED FROM MILK PROTEINS

Edible Packaging From Milk

The US FDA is testing a milk protein called casein could be used in the future to develop a form of edible packaging that's 500 times better at keeping food fresh than plastic. Plus, you could just eat it once you remove it from your meal.

To create the biodegradable packaging, scientists mixed the casein protein with water and then poured it out on a sheet where it dried into a thin, edible wrapper that's malleable enough to be stretched across food items or used as a lid.

In addition to casein, researchers tested adding glycerol and citrus pectin to the already-formed casein film, which added both structure and softness.

This means other additives and flavors could go into forming the packaging to either enhance the food contained within, or to improve the taste of the new “plastic.” The film itself can also dissolve in water, which could mean big things for packets of soup or single-serve foods like cheese.

Essentially, packaging created from casein could be immersed in boiling water to form your delicious bowl of chicken noodle soup, or eliminate the need to peel the wrappers from foods entirely. Just throw the whole thing on a sandwich! Ranch-flavored milk packaging? It could be in the cards.

Unfortunately, the packaging isn't quite ready for distribution, as the USDA is still hard at work bringing it into fruition. It could happen in the future, however, the real question is, what would it taste like?

<http://www.popsoci.com/your-food-could-soon-come-wrapped-in-milk>



Obama Makes Truckers Fall in Line

The Obama administration released its new fuel efficiency and greenhouse gas emissions standards for heavy-duty trucks recently. This is expected to go a long way in curbing carbon emissions while cutting freight costs for trucking companies and fleet owners.

Ben & Jerry's, IKEA, General Mills, PepsiCo, Annie's, Patagonia, Trillium Asset Management and others stepped up to call for strong standards the final rules are said to be actually stronger than the draft ones initially proposed last year.

The new rules will yield an additional 10 % reduction in carbon emissions, or a total reduction of 1.1 billion tons of emissions through 2027. This is great progress for the US economy and environment as trucking sector is the fastest growing single source of carbon emissions.



Jerry Greenfield (left) and Ben Cohen (right).
Source: en.wikipedia.org

Reports suggest that when fully phased in, the rules will save more than 700,000 barrels of oil per day and deliver \$200 billion in savings for truckers and fleets. In turn, companies that rely on trucking, particularly consumer brands and retailers, will also see reduced costs, as will consumers.

Between these rules and the continued improvements in light-duty vehicle fuel economy, the Obama administration has done more to reduce oil dependence than any other previous administration. "The US is now the global leader in heavy-duty truck fuel efficiency standards and will serve as an important model that will help drive investment in fuel-saving technologies around the world," an official statement said.

This is likely to influence the transportation sector in India as well as the road network expands at a brisk pace.

DiCaprio Takes Climate Change Campaign to Presidential Elections

Leonardo DiCaprio has unveiled his climate change documentary 'Before the Flood' at this year's Toronto International Film Festival, saying the film is intended to "give the scientific community a voice."

The film was directed by Fisher Stevens. It chronicles DiCaprio's efforts around the globe to raise awareness about climate change. DiCaprio is a United Nations Ambassador of Peace.



The Academy Award-winning actor says, **"We are truly at a turning point in history." He says this issue "depends on the education of the public and the evolution of our species to combat what is the largest crisis we've ever faced."**

Stevens says the film's release is intentionally timed to the US presidential election. The film will air on October 31, 2016, on National Geographic.

The film presents an account of how society can prevent the demise of endangered species, ecosystems and native communities across the globe. Audiences are presented with visual evidence of a worsening environmental crisis that is inflicting irreversible damage on pristine landscapes from Greenland to Indonesia, disturbing the balance of our planet's climate and hastening the extinction of animals, Nat Geo said. **It also presents practical solutions to save the planet.**

Interview subjects in that film include Barack Obama, Bill Clinton, John Kerry, United Nations Secretary-General Ban Ki-moon and Pope Francis, as well as top NASA researchers, forest conservationists, revered scientists, community leaders and fervent activists working to save the world.

"Climate change is the most fundamental threat facing our planet," said DiCaprio. **"We must work together as a collective voice to demand major action now.** Our very survival depends on it. This documentary translates the symptoms and solutions of climate change before information is distorted, as it often is, by those with a financial interest in fossil fuel production."

The North East Can Generate All Its Power From Renewable Sources

CSE's 'Mini-grids: Electricity for All' report believes there's a lot of potential to be tapped in the North East

“Currently, renewable energies like solar and wind have very little penetration in India's north-eastern states -- even though there is a huge potential to meet a majority of the region's energy demand from solar, wind and small hydropower. Manipur is, in fact, the only state in the region that has a solar policy,” said Chandra Bhushan, deputy director general, Centre for Science and Environment (CSE), while opening a conference recently on ‘100 per cent renewable energy future for the Northeast’. CSE organized the one-and-half day conference to promote renewable energy in the region for energy access.

Of India's 1.3 billion people, almost 240 million do not have access to electricity. The International Energy Agency has further projected that India will have 147 million people without electricity in 2030. At present, renewable energy in the northeast refers only to small hydro power (less than 25 megawatts – even though the region sits on potential reserves of almost 60,000 MW.

To add to this, the Northeastern states have one of the lowest per capita electricity consumption rates in the country: there are still roughly 4.85 million households – more than 50% in the region -- that do not have access to electricity. In fact, the per capita electricity consumption in the region is as low as some of the least developed nations.

The situation is compounded by the fact that the current government schemes to provide electricity are primarily based on grid expansion. This model has so far not been able to provide electricity to the poor in the country, and may yet fail to do so.

It is in this context that CSE's latest report ‘**Mini-grids: Electricity for All**’ assumes significance. The report was released and discussed at the event. The report presents a model centered on generation-based incentive and subsidy for setting up distribution infrastructure to ensure every household receives one unit of electricity every day. It is important to understand that the national grid and mini-grids would be complementary to each other.

Bhushan says: “The model presents a strategy to provide universal access of electricity using renewable energy based decentralized distributed generation / mini-grids. It will enable the north-eastern states to leapfrog to a new clean energy future. This will also ensure democratization of power generation.”

Agartala First Solar City in NE

Agartala, capital of Tripura, is all geared up to be Northeast's first solar city. In 2012, 700 hamlets and 50 villages in remote areas were provided solar energy, benefiting more than 35,000 families, mostly tribals.

Of India's 60 proposed solar cities, eight cities have been identified in the northeastern region by the ministry of non-renewable energy (MNRE). They are Itanagar in Arunachal Pradesh, Agartala in Tripura, Guwahati and Jorhat in Assam, Aizawl in Mizoram, Imphal in Manipur and Kohima and Dimapur in Nagaland.



The 2016 Sustainability Leaders

A GlobeScan | SustainAbility Survey

In partnership with
Sustainable Brands



NGOS Make Maximum Impact

A 2016 global survey of 907 stakeholders in business, government, NGOs and academia, across 84 countries, has found NGOs to be contributing the most and found governments' disappointing

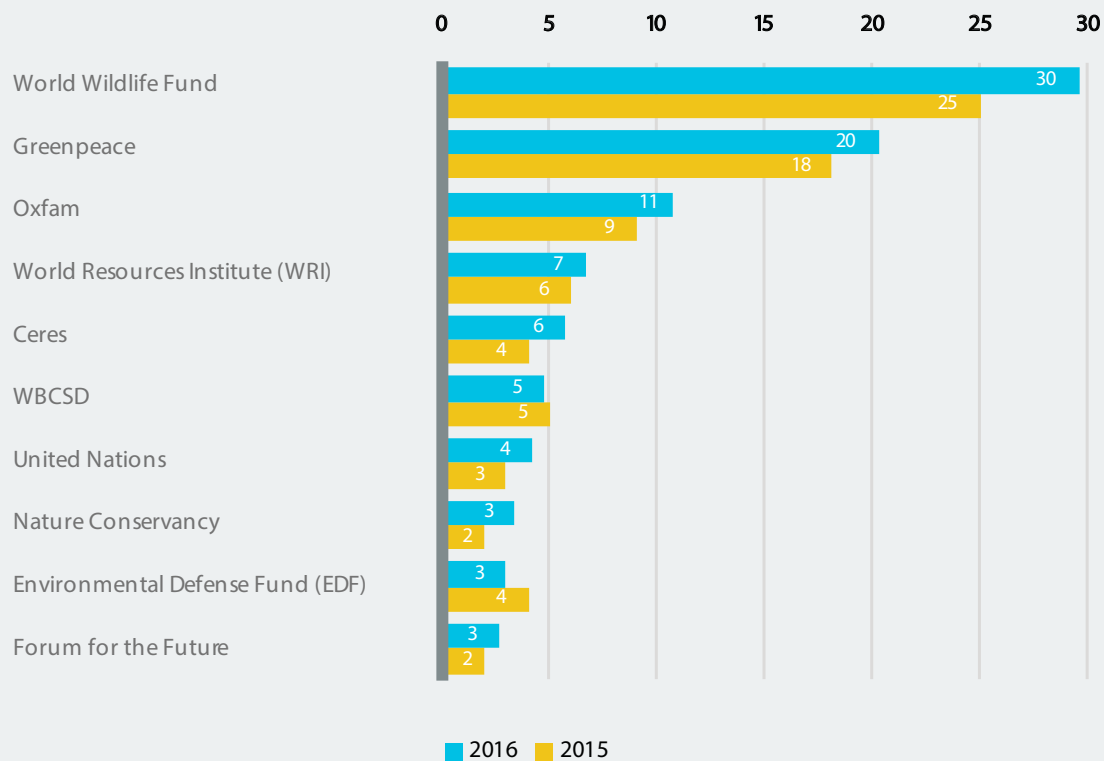
Titled 'The 2016 Sustainability Leaders,' a survey by GlobeScan and SustainAbility, published in partnership with Sustainability Brands, the survey threw up a few surprises. The survey's purpose was 'to evaluate the progress that various institutions have made since 1992 and reflect on their expectations for the next 20 years.' The surveyors also 'wanted to know who the experts consider to be sustainability leaders among corporations, NGOs and national governments.

The highlights:

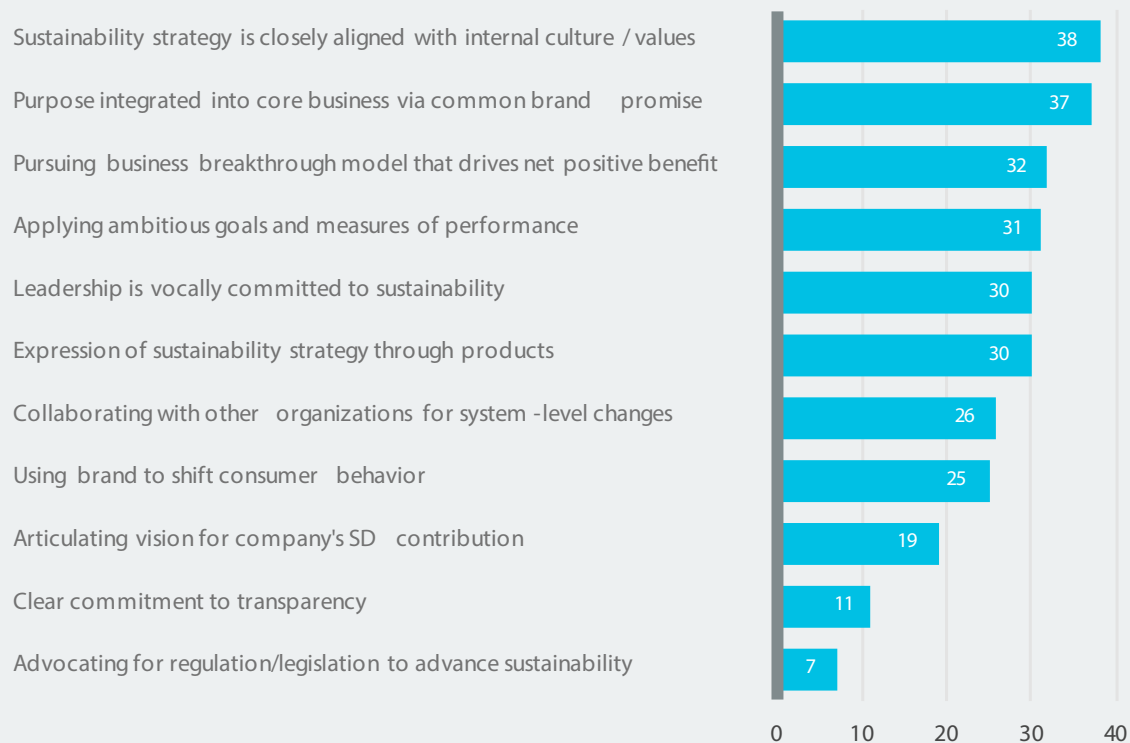
- The non-state actors continue to outperform all other institutions on sustainable development – especially national governments, which remain at the bottom of the list for their achievements.
- The landscape of expectations for future leadership has been shifting. The private sector has been facing growing expectations to play a larger role, while the perceived role of governments in advancing the sustainable development agenda has been diminishing.
- The Non-profit organizations are seen as having made the largest contribution to sustainable development since the 1992 Earth Summit in Rio, followed by social entrepreneurs, academic organizations and citizen-led social change movements.
- Business has seen a steady rise in expectations for leadership in the last four years, while the level of responsibility placed on national governments has been declining. The past performance record and expectations for future leadership remain at odds for key institutions. National governments and business are seen as having very poor track records but at the same time are expected to play key roles leading the sustainable development agenda in the next 20 years.



% of Experts

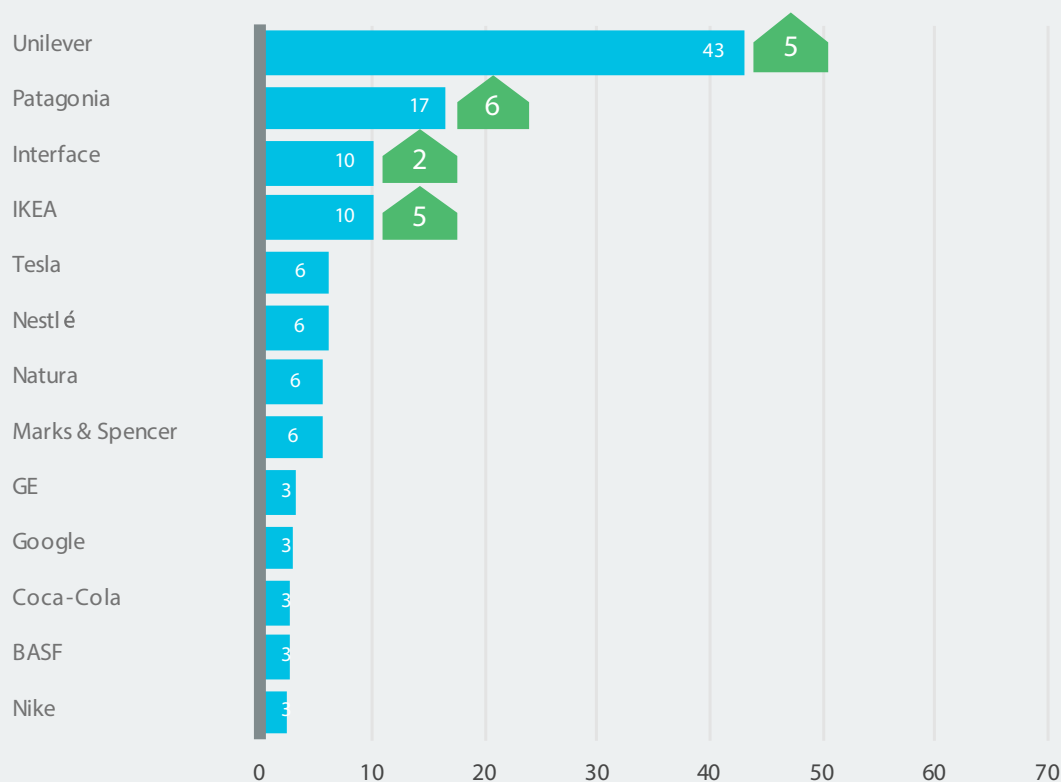


% of Experts, Prompted

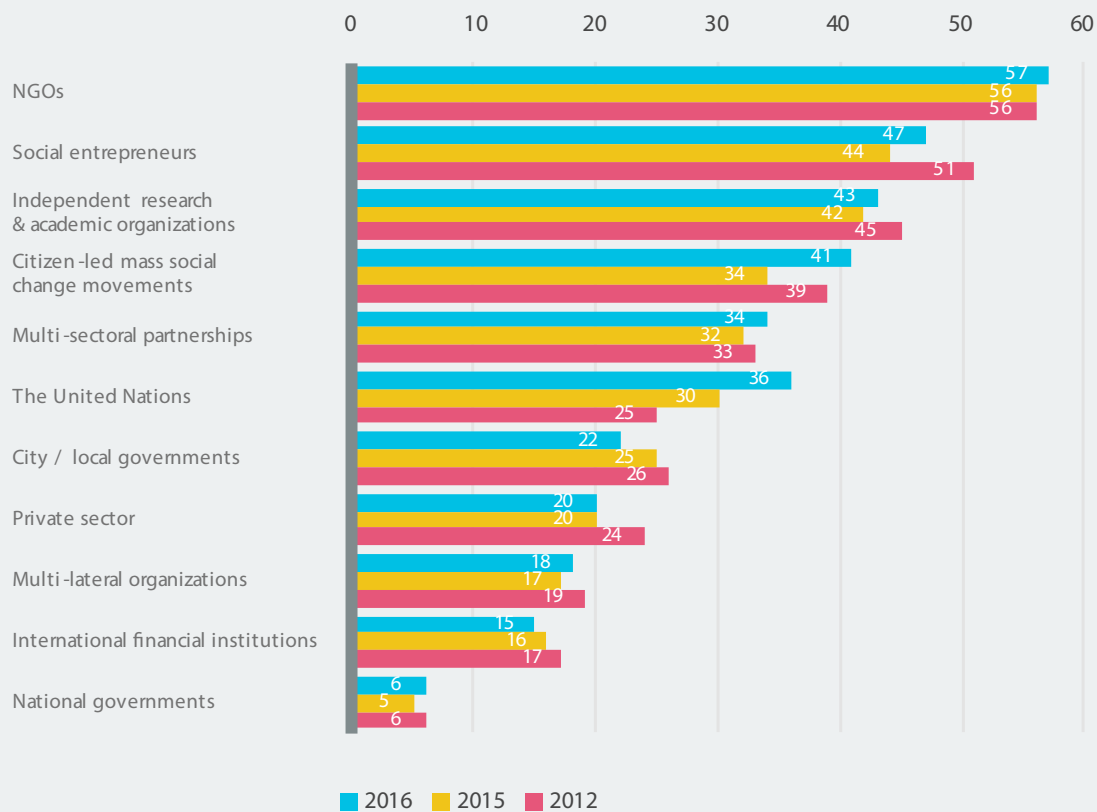




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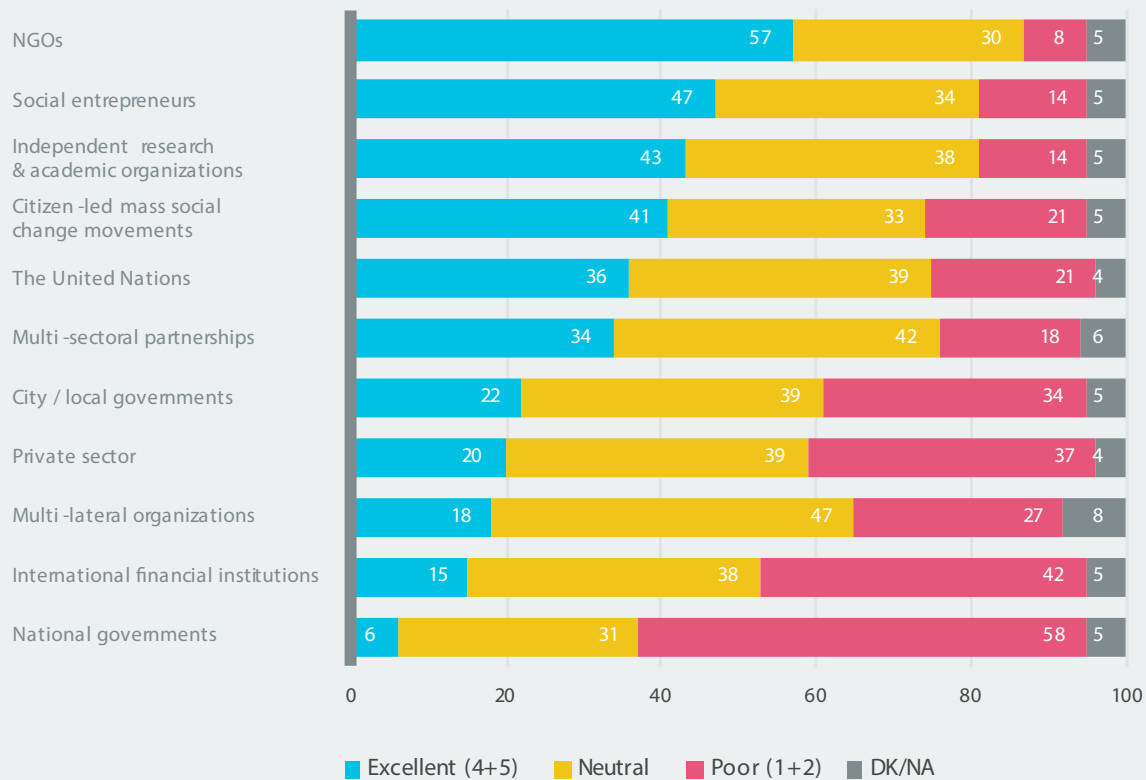


"Good performance" (4+5)

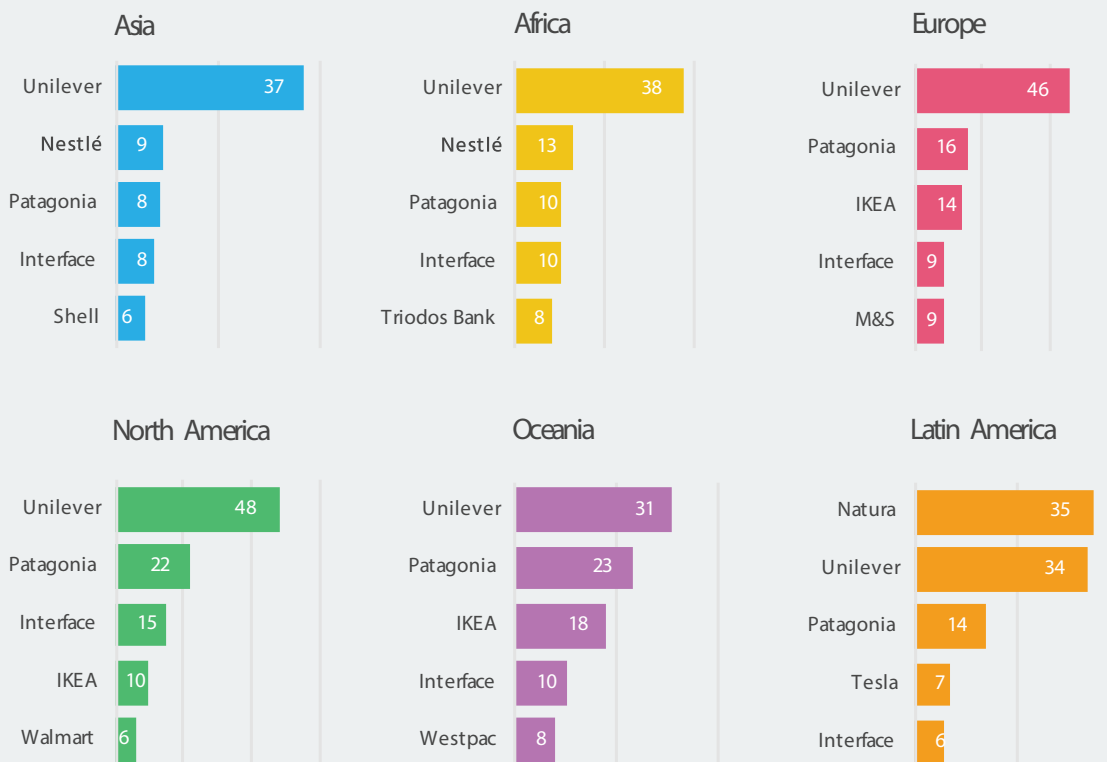




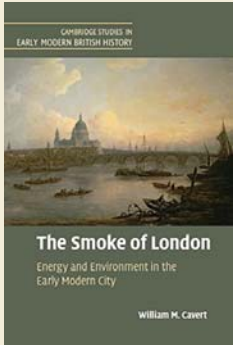
All Respondents



All Respondents , by Region



BOOKSHELF



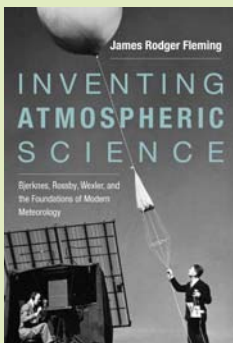
The Smoke of London: Energy and Environment in the Early Modern City

By William Cavert, Cambridge University Press, August 2016

Air pollution may seem to be a problem uniquely of the modern age, but in fact it is one that has bedeviled people throughout history. In his book the author examines how Londoners first grappled with the problem of air pollution created by the burning of coal. With concerns expressed for the dwindling supply of wood in England.

Londoners in the 16th and 17th centuries increasingly turned to coal to heat their homes and power their businesses. As the amount of smoke produced by burning coal grew it prompted a variety of responses, from crown-directed efforts to prevent it from contaminating the royal space to its adoption in poems and plays as a symbol of modern urban life. As Cavert reveals, these efforts to grapple with the problem of coal smoke presaged the reaction to the much larger issue of industrial pollution throughout England during the Industrial Revolution and, in the process, framed many of these issues in ways with which people are familiar today.

William M. Cavert is a historian of early modern Britain focusing on urban and environmental history, holding a PhD from Northwestern University, Illinois. He has published 'The Environmental Policy of Charles I: Coal Smoke and the English Monarchy, 1624-1640' in the Journal of British Studies, as well as related studies in Global Environment and Urban History.



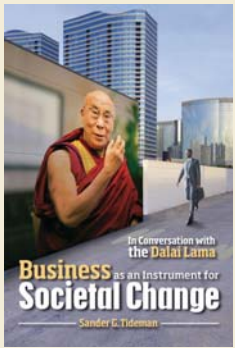
Inventing Atmospheric Sciences: Bjerknes, Rossby, Wexler, and the Foundations of Modern Meteorology

By James Rodger Fleming, MIT Press, August 2016

This is a book about the future – the historical future as three interconnected generations of atmospheric researchers experienced it and envisioned it in the first part of the twentieth century.

New book is a big picture history of atmospheric science that follows the lives and careers of three men who worked at the center of meteorological research in roughly the first half of the 20th century: Vilhelm Bjerknes, Carl-Gustav Rossby, and Harry Wexler. The book is not a biography of three lone geniuses: Fleming is careful to show that the emergence of atmospheric science was a team effort and the result of work by many people in different disciplines and areas.

Fleming's use of archival materials allows readers to appreciate the significance and roles of otherwise-overlooked or ignored historical figures, including Anne Louise Beck (who we discuss in the course of the podcast). *Inventing Atmospheric Science* weaves together the histories of technology, mathematics, hydrodynamics, the aerospace industry, global pollution, climatology, chaos theory, the US Weather Bureau, and much more into a clear and engaging story that's also a pleasure to read.



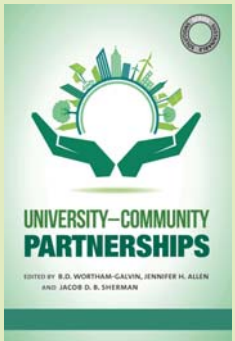
Business as an Instrument for Societal Change: In Conversation with the Dalai Lama

By Sander Tideman, Greenleaf Publishing, September 2016

This book is the result of two decades of research and dialogue with His Holiness the Dalai Lama and other leaders in business, government, science and education. Author Sander Tideman, a lawyer and banker who has maintained a friendship with the Dalai Lama over all these years, presents a practical framework and methodology to develop a new kind of leadership - one fit to repurpose the business world and tackle escalating social, economic and environmental needs. The Dalai Lama rarely speaks directly on the topics of business, leadership and economics. Yet in the dialogues recounted here, his wisdom - combined with key insights from business and public leaders - creates a unified shift towards a consciousness of interconnectedness, offering profound insights for practitioners and general readers alike.

The book describes Tideman's fascinating personal journey, which brought him to question the underlying motivations and goals of business leadership and to seek a new paradigm for a more sustainable approach. **Reflecting Tideman's sharp perceptions and infused with the Dalai Lama's unmistakable joy, this book has the power to change your way of thinking.**

The author is an expert and consultant in leadership development and sustainable business. He is MD of Mind & Life Europe, researcher at Rotterdam School of Management, Erasmus University, and co-founder of Flow Impact Fund.



Sustainable Solutions: University-Community Partnerships

Edited by B.D. Wortham-Galvin, Jennifer H. Allen & Jacob Sherman, Greenleaf Publications, September 2016

What is the role of the university? Current systems may stress research output, but Wortham-Galvin, Allen, and Sherman seek to re-establish the importance of teaching and service in the work of the 21st-century university. The **Sustainable Solutions** series shares Portland State University's experience of community-engaged teaching and research. With a focus on sustainability, we see that such collaboration is vital to making Portland one of the world's most sustainable cities.

Volume 2, **University-Community Partnerships**, builds on the themes introduced in Volume 1, **Let Knowledge Serve the City**, to explore how these partnerships play out in practice. Covering 13 projects, which range from supporting local artisans and researching food access, to sharing Indigenous history and decolonizing perceptions of knowledge, readers receive pragmatic advice on working with community organizations. Authors also offer critical reflection on how theories of engagement have structured PSU's work and how their findings impact our very understanding of partnership.

The authors are faculty members at Portland State University, and **JACOB SHERMAN** is Sustainability Curriculum Coordinator at Portland State's Institute for Sustainable Solutions.

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Tata Institute of Social Sciences

<http://campus.tiss.edu/guwahati/programs/master-degree-programmes/ma-ecology-environment-and-sustainable-development>

Master of Business Administration in Natural Resource Management & Sustainable Development

Amity School of Natural Resources & Sustainable Development

www.amity.edu/asnrds

Science and Management for Sustainable Living

www.bhoomicollege.org

Post Graduate Diploma Course in Sustainable Development (PGDM-SD)

<http://bimtech.ac.in/>

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Silver Bright Institute of Management

<http://www.htcampus.com/college/silver-bright-institute-management-sbim>

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Chhattisgarh University

<http://www.cguniversity.com/>

Post Graduate Diploma

IGNOU- Indira Gandhi National Open University

<http://www.ignou.ac.in/>

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<http://www.minds-india.org/>

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<http://www.bharatvidyapeeth.edu/Campuses/Pune/default.aspx>

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University of Calicut

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Annamalai University

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Jawaharlal Nehru University

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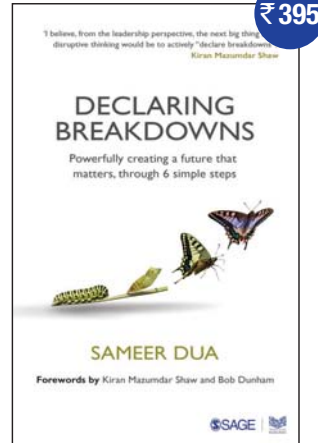
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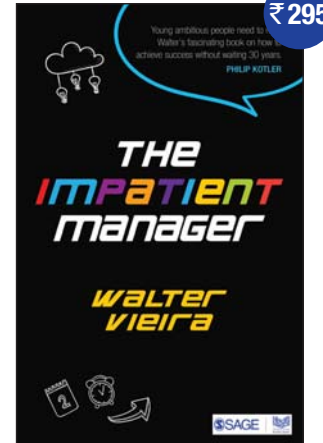
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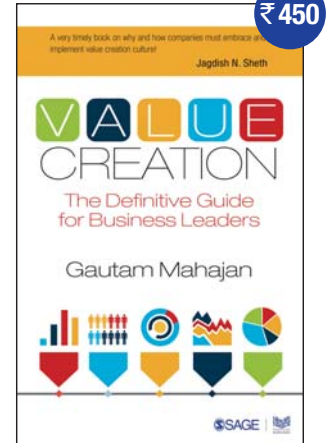
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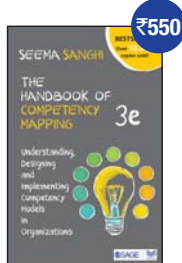
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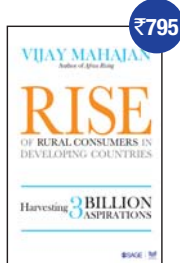
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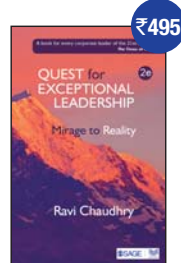
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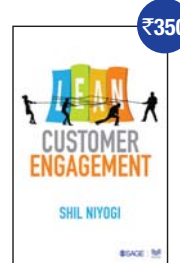
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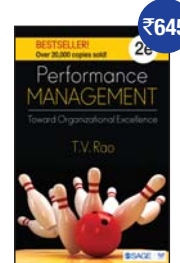
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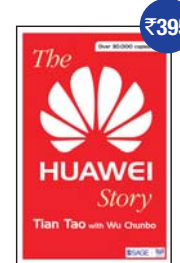
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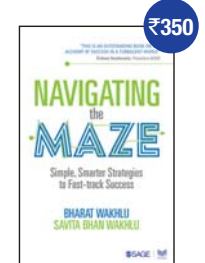
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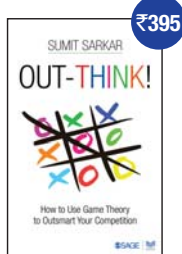
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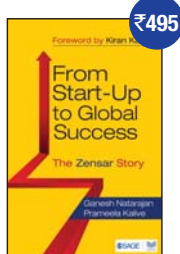
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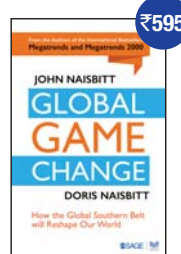
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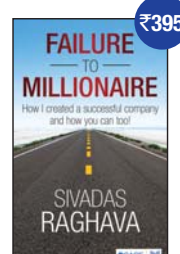
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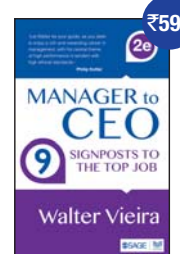
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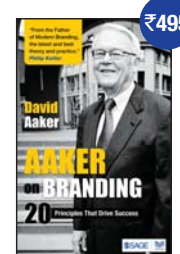
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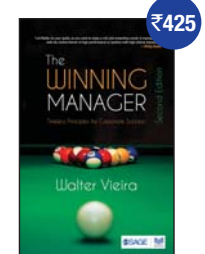
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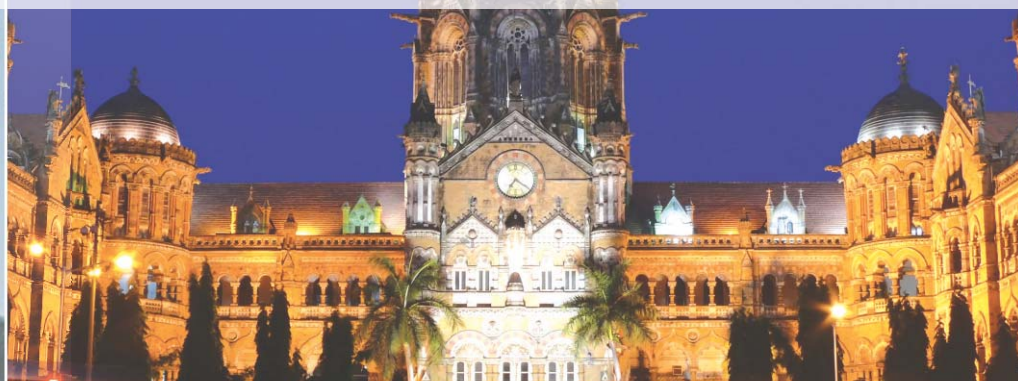
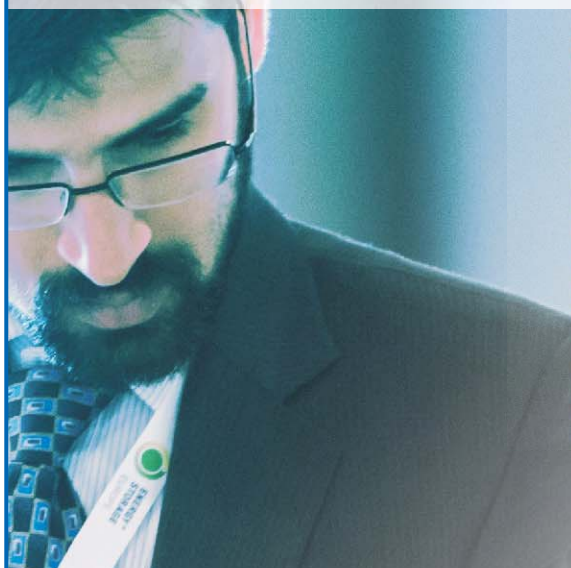
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Smart Cities Summit 2016

Friday, September 30, 2016 | Indian Habitat Centre (IHC), New Delhi

FICCI is coming up with the “2nd Annual Summit on Smart Cities – Wining the Challenges” which is scheduled to be held on 14th of September' 2016. The focus of the Summit this time is to map the progress of the sector and will draw attention towards implementing the blueprints that is drawn in due course.

Key Highlights of Summit 2016

- Ministry invited for the Special Address and Inauguration
- PwC is the Knowledge Partner
- Supported by National Institute of Urban Affairs and Smart Cities Council
- 33 cities' (the ones selected under the initiative) Nodal Body for Smart Cities have been invited
- Will address the challenges of on-going smart city projects and outline the way ahead

Cities Confirmed so far:

- **Mr. Vinay Chand**, Commissioner, Tirupati Smart City
- **Mr. Alokesh Prosad Roy**, Commissioner, Bidhannagar Municipal Corporation
- **Mr. Chandramouli Shukla**, CEO, Bhopal Smart City Development Corporation Limited
- **Mr. Rahul Singh**, Deputy Additional Councillor, Pasighat Municipal Council
- **Mr. Tikender Panwar**, Commissioner, Shimla Municipal Corporation
- **Mr. Ashok Kumar Sharma**, Municipal Commissioner, Municipal Corporation of Faridabad
- **Mr. R Meenakshi Sundaram**, IAS, Vice Chairman, Mussoorie Dehradun Development Authority

Highlights of the summit 2015

- **Shree M Venkaiah Naidu**, Hon'ble Minister of Urban Development, Housing and Urban Poverty Alleviation and Parliamentary Affairs inaugurated the Summit,
- **Dr. Nandita Chatterjee**, Secretary, Ministry of Housing and Urban Poverty Alleviation gave a keynote address
- **Mr. Adarsh Shastri**, Parliamentary Secretary, Ministry of Information & Technology, Government of NCT Delhi shared his inputs over Smart City - Leveraging ICT, GIS and Mobile services
- International speakers from Korea Land and Housing (LH) Corporation, City of Yokohama, US Green Building Council, Embassy of the Kingdom of the Netherlands, German Centre for Industry and Trade Delhi Private Limited, The City of Adelaide
- 120 companies, 48 speakers & 250+ participants
- Reputed companies like CISCO, ESRI, Essel Infra, Mahindra World City, Rolta and IDE Technologies showed their presence as sponsors



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Arpana Gaurav / Udit Dasgupta
Federation of Indian Chamber of Commerce & Industry (FICCI)
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- Corporate Planning
- Investor Relations

From sectors:

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- Gas/LNG trade, shipping, transmission, distribution
- Government agencies
- Gas based power generation
- Gas/LNG related project finance, asset management, hedge funds, equity/fixed income
- Petrochemical
- Gas pipeline and high pressure transportation

Course Highlights

- Global gas/LNG market and market structure
- Current gas/LNG trading activities in Europe, USA, Asia Pacific, Africa, Atlantic and Middle East region
- Principles and formulation of gas/LNG Sales and Purchase Agreement (GSPA/SPA) and Gas Transportation Agreement (GTA)
- Contract terminology and construction - operational, commercial and legal basis of gas, LNG and Gas Transportation Contracts
- Gas/LNG pricing strategy and price indexation in a competitive gas market
- Contract negotiation - best practice techniques

Key Learning Objectives

- Background knowledge to facilitate gas/LNG sourcing decisions
- Understanding current trends of the gas organisation structure
- Knowledge of the underlying reasons for gas contract terms and conditions
- Sufficient knowledge enabling construction of gas, LNG and gas transportation contracts
- Expertise for contract negotiation
- Techniques of gas/LNG pricing in a competitive market
- Understanding of operation of trading hubs, spot and arbitrage
- Knowledge of transportation tariff determination methodologies

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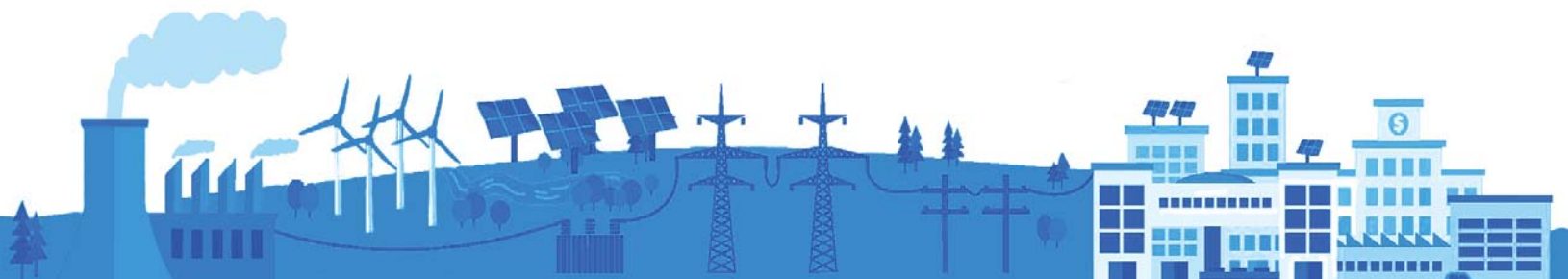
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srestha@cseindia.org

Celebrating 25 years of Down To Earth Magazine

September 20, 2016, New Delhi
vibha@cseindia.org

Antibiotic misuse in food-producing animals and aquaculture

September, 2016
parul@cseindia.org

Training Programme on Preparation of City Sanitation Plan with a focus on Effective Septage and Faecal Sludge Management

September 20-22, 2016, Patna
ramesh@cseindia.org

Training on Urban Rainwater Harvesting System

September 24-27, 2016, Patna
ramesh@cseindia.org

IFAT India 2016 - India's Leading Trade Fair for Water, Sewage, Refuse and Recycling

September 28 – 30, 2016 Joydebpur, Bangladesh
Abdullahal-Muyeed@wateraid.org

National Conference on Environment and Natural Science

October 1, 2016, Bangalore
info@nationalconferences.org

National Conference on Agriculture and Biotechnology

October 1, 2016, Bangalore
info@nationalconferences.org

National Conference on Medical & Health Science

October 1, 2016, Bangalore
info@nationalconferences.org

International Training Programme on Water Sensitive Urban Design and Planning

October 3 - 6, 2016, Nairobi, Kenya
wamiti@kewi.or.ke / mahreen@cseindia.org

Succession Planning, Performance Management, and ROI on Training & Development

October 10 – 13, 2016, Johannesburg
<http://www.infocusinternational.com/successionplan/>

Indian Conference on Life Cycle Management (ILCM) 2016

October 17-18, 2016, Federation House, New Delhi
<http://indialca.com/upcoming-events.html>, ilcm@ficci.com

International Training Programme on Water Sensitive Urban Design and Planning

November 7 - 10, 2016, Cape Town, South Africa
sudhirp@wrc.org.za

PowerWeek

7 – 11 November 2016, Singapore
<http://www.power-week.com/>

Training programme on CORPORATE SOCIAL RESPONSIBILITY – PLANNING AND IMPLEMENTATION

November 14 - 16, 2016, New Delhi
digvijay@cseindia.org

CSE's short-term EIA training programme Understanding Eia: From Screening to Decision Making

November 21 - 25, 2016, New Delhi
digvijay@cseindia.org

Parivartan Sustainability Leadership Awards

November 24, 2016, New Delhi
www.parivartanawards.in

Intergas

November 28 – 29, 2016, Nice
<http://www.gassummit.org/info@bamics.eu>

Training Programme on Social Impact Assessment

December 12 - 16, 2016, New Delhi
digvijay@cseindia.org

International Training Programme on Water Sensitive Urban Design and Planning

January 16 - 20, 2017, Nairobi, Kenya
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