

# The 'Middle-out' Approach to Climate Change

August 2017 ₹50 Issue 52

It's fashionable today to push for bottom-up approaches for addressing all major problems. However, authors of a new book argue for a middle-out approach that takes advantages of learnings and experience of leadership from the top and blend it with ground realities. Here's a peek into the idea:

Given the scale and speed of global climate change and its attendant socio-ecological disruptions, there is an urgent need to begin identifying successful sustainable development strategies across multiple social, geographical and temporal scales. In this scenario neither top-down nor do bottom-up approaches alone have the ability to produce the needed insight. One possible solution to this puzzle is "middle-out" approach.



The "middle-out" approach does not call for new institutions bridging these extremes. Middle-out refers instead to a system of information flow wherein lessons learned in the previously isolated and closed-loop community-based experiments is aggregated and organized. With access to this information, top-down decision-makers can more effectively support strategies relevant to local contexts and community-based actors, who previously relied on ad hoc networks to learning anecdotally from one another, can more systematically learn directly from one another.

In short, the middle out approach relies on aggregation of case studies and other reports of community-based sustainability experiments to develop a knowledge base for community-based sustainability experimentation processes that can be leveraged by a wide range of decision-makers and actors at multiple levels. **The "middle-out" platform will create a space for both top- and bottom-level stakeholders to combine the power of the descriptive richness of qualitative case studies with the analytical power of natural language**

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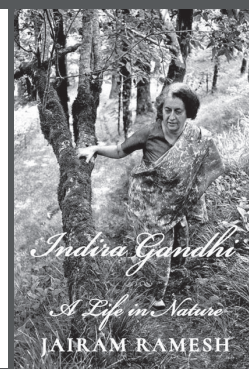
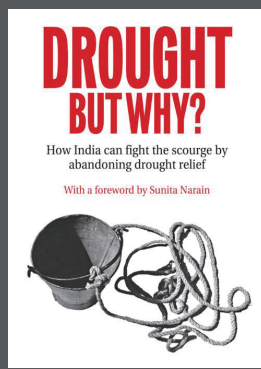
IMFA Received ET CSR Award

LEAF Ties up with AP, Karnataka

Vedanta's Wins CSR Asia Practices Award

Treated Sewage To Revive Bengaluru Lakes

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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.

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Information in this publication is drawn from a variety of sources, including published reports, interviews with practicing managers, academia and consultants. While doing so utmost importance is given to authenticity.

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# Advantages of The Platform

- Geographically isolated communities can more easily exchange information and knowledge.
- National or state level policy makers can be more strategic in applying top-down strategies by learning from previously inaccessible and disconnected knowledge that emerges from communities.
- The World Bank, ADB and other financial institutions that direct funding through state and national governments towards poverty eradication and sustainable development can see more transparently the justifications of decisions about why, when, where and how to fund specific initiatives, especially at the grassroots where large institutions seldom apply their resources directly.
- The middle-out approach can reduce the costs of obtaining community level feedback because the middle-out framework itself generates reports on the experiences of communities engaging in sustainable development initiatives.
- The middle-out approach complements rather than replaces the existing top-down and bottom-up approaches to sustainable development governance. Case studies are valuable in providing micro-level contextual knowledge, but at the same generalizing across cases is problematic because each case study represents a sample size of one. Our middle-out approach proposes to aggregate large numbers of case studies and then apply qualitative big data analysis techniques that can produce topics, categories, and tags to represent them, that can make generalization across the cases possible.
- The most important feature of middle out approach is that it accumulates indigenous and traditional knowledge that would otherwise be underutilized or even lost.

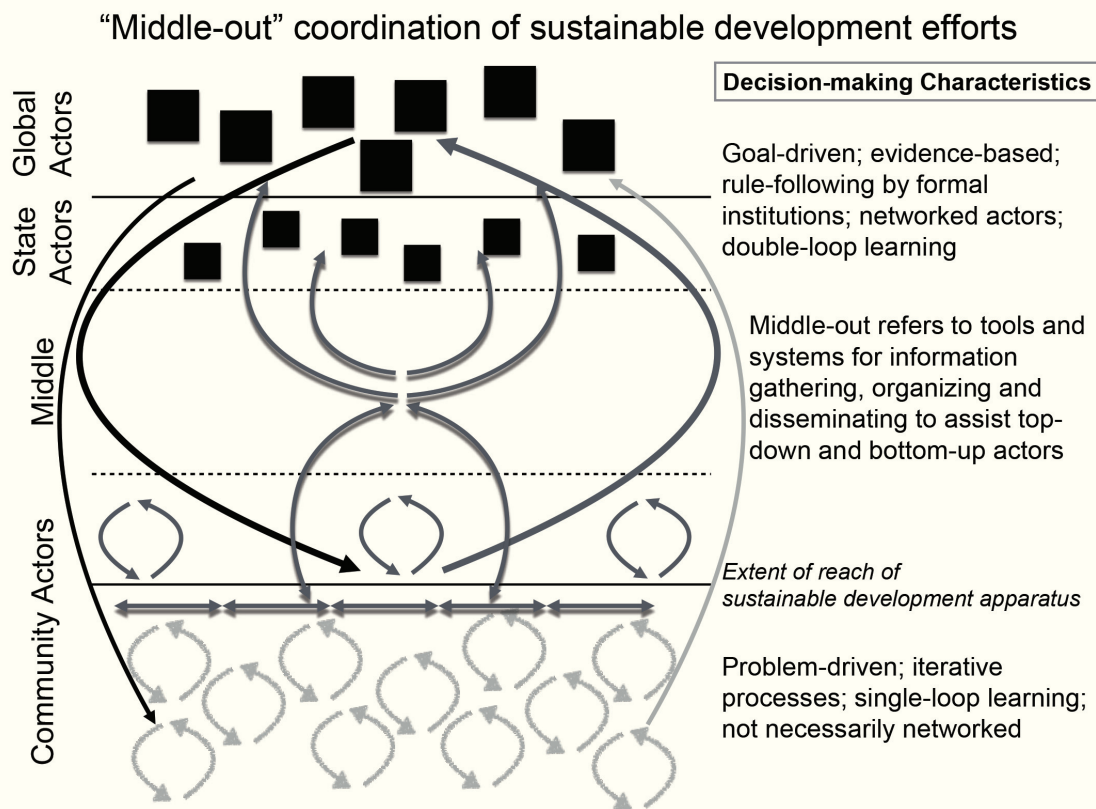
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**processing and other information science tools.** This strategy holds the potential to bring to bear substantial yet untapped knowledge in sustainable development strategies. The virtual “middle-out” space is possible because of present rapid diffusion and access to information and communication technologies (ICTs) in developing countries like India and Bangladesh.

**What is unique about the middle-out approach is its focus on what is essentially an information management system capable of capturing knowledge emerging out of bottom-up small experiments and integrate it with top-down knowledge, strategies and resources.** The middle-out approach aims to overcome the gap between the historically dominant top-down approach to sustainable development and the more recent emphasis on bottom-up approaches in which solutions emerge and are implemented by communities.



These ideas are part of publications by Zavestoski S. & Swarnakar P. (2017). Neither ‘Top-down’ nor ‘Bottom-up’: A ‘Middle-out’ Alternative to Sustainable Development. ‘Bottom-Up’ Approaches in Governance and Adaptation for Sustainable Development: Case Studies from India and Bangladesh, 315. Edited by P. Swarnakar, S. Zavestoski & B. K. Pattnaik. SAGE Publications, New Delhi.



P. Swarnakar



B. K. Pattnaik



S. Zavestoski





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- Start-ups Disrupting Publishing
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- 'The Story of Indian Business' Tales Of Trade, Adventures In The Bazaar And Romance Of The High Seas
- 'Making a Living vs. Making a Life' by Gurcharan Das

### Other Activities

- Authors Meet Authors
- The Art of Writing Biographies
- Book Launches

### Why You Must Attend

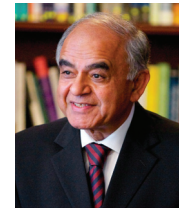
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13 November 2017	Workshop C: <b>Solar Financing – Improving Liquidity to Solar PV Projects</b>
16 November 2017	Workshop D: <b>Power Market Economics – Modelling Tools and Value Drivers</b>
17 November 2017	Workshop E: <b>Understanding Electric Power Contracts</b>
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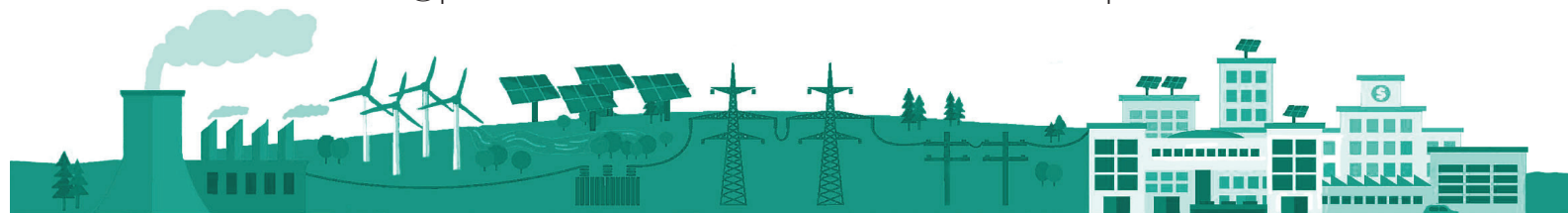
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# How Farm Taaza Is Revolutionizing Fruits & Vegetable Sourcing



The South Indian fruits and vegetable market size is more than \$3 billion. Less than five percent is currently sourced by big retailers directly from farmers. The opportunity is immense. The next wave of sourcing will use advanced technology and analytics, says **Kumar Ramachandran, CEO of GS Farm Taaza**, a leader in the B2B sourcing segment

It's a shame that 30% to 40% of fruits and vegetables grown in India get spoilt because of too many touch points in the supply chain – with several middlemen handling them. Whoever reduces the touch points and sources directly from the farmers has a big business opportunity awaiting them.

That's what Farm Taaza is attempting to do. Started in 2015 by Kumar Ramachandran and funded by Silicon Valley angel investors, the company has done a turnover of Rs. 20 crore in 2016. It hopes to cross a turnover of Rs. 40 crore in 2017-18 and be close to breakeven by then. "We are a leader in the back end of the sourcing business, all the other big names we hear are in the front-end sourcing," Mr. Ramachandran told **Benedict Paramanand of SustainabilityNext**.

**Edited excerpts:**

## Why should farmers be interested in Farm Taaza?

We plan to implement solutions where our farmers can plan their harvesting dates to meet our requirements and offer to pick up the produce completely. We pay farmers on time. And pay for exactly what they offers (in terms of weight) and we tell them what we need and we also give a forecast. We are starting to treat farmers like professionals so after every payment we also give them payment advice showing what they delivered and what we paid. They also can get historical data on our purchases from them.

We are trying to solve forecasting problems by using analytics. We tell the farmers what we want a week or a few days before, though our customers give their orders only a day before delivery.

We now have a mobile app giving real time information on prices and delivery status. The next wave – the system will tell me how to price, where and how much to procure. We plan to provide expert advice to the farmers on improving the yield and field operations as well. This could be through partnership with many Agri-Tech startups that are now expanding in this critical space.



## How's the competition?

This is a very unorganized business and operates the way it has been for past 100 years; along with many ethical challenges. We welcome organized competition since the size of the pie is so huge. Even if each of us takes 5% to 10% market share it will make a big difference to the segment.

**In the B2B segment, organized players do less than 1 % today.**

We supply directly to large hospitals, kirana stores, hotels and some supermarket chains as well across Bengaluru and Mangaluru in Karnataka, Chennai and Coimbatore in Tamil Nadu, and Hyderabad. Most large retail chains are our customers today.

## Why should they take from you?

We tell them where the produce comes from, when it was harvested. Freshness is assured by making the produce available to the customer within 8-22 hours of harvesting. The produce is optimally packed and transported and graded at the source only to reduce spoilage.

## Role of Technology

Unless we use complete technology, we cannot solve supply chain problems. We are still in the first phase of technology application. What we call as leakage – we have reduced it by 70% and our next goal is next 90%. By end of this year will be moving to machine learning algorithm based solutions using analytics to further improve our capability and profitability.

## Future Plans

By May 2018 – we will break-even. I don't want to scale for the sake of scale. We don't want to a billion dollar business; we want to be a profitable billion dollar business. Farm Taaza may have a shot at that number in five years. That's where we are headed. Market is there.

**Most startups in this and similar areas focus on the front-end (Customer App). Our priority is to fix the supply chain first along with our unit economics. When I clean the back-end and move to a technology-based decision-making approach, the world is ours.**

## Social impact business

Ramachandran and his wife Meena were tired doing the back and forth trips between the United States and India for three decades. They heeded their daughter's advice to focus on a business which could have a massive social impact.

He started teaching in New Jersey in 1984. Moved to work in Michigan, then to Silicon Valley in 1991. Set up semi-conductor company Applied Materials in India in 2002. Did a start-up in 2005 on product design software - didn't want to be a big but a niche player and sold this in 2014. Started a LED lighting company in 2009 and sold it in 2011.



## Lake Warrior - Sahithi Pingali

By SN Team

Behind the starry luminescence which Sahithi Pingali finds herself in today is a heart made of green gold. Her success can be attributed to her innate ability to amalgamate science, technology, civic concern and a collaborative mindset. Yet, it is apparent that all these are driven largely by her love for lakes

**S**ahithi Pingali, a grade 12 student from Inventure Academy, Bengaluru, won several awards at most competitions she entered in the last one year. The list is long. At The International Sustainable World Engineering Energy Environment Project) Olympiad held in Houston, (ISWEEEP) Texas, recently Sahithi Pingali won the Gold Medal for her research on 'An Innovative Crowd sourcing Approach to Monitoring Freshwater Bodies'.

At the INTEL ISEF international finals, she won 3 special awards in addition to placing overall second in the category Earth and Environmental Sciences. ISEF is the world's largest international high school STEM (science, technology, engineering and mathematics) competition. Created and run by Society for Science & the Public (SSP), it has been honoring young researchers since 1950. Sponsored by Intel, ISEF this year brought together students from 78 countries.



At the ISWEEEP award ceremony Sahithi said: “The interesting thing about my project is that it’s all about crowd-sourcing; getting students and citizens to contribute scientific data. Our Lakes Our Voice was the inspiration for this – it was the dedication and commitment of my team members at Inventure that convinced me that high school students were capable of gathering such reliable data, while increasing their environmental awareness and knowledge of science. I hope students all over Bangalore will take this as a call for action to adopt lakes and lead the way for the rest of the world.”

Sahithi was first exposed to the impact of development on Bangalore’s lifeline – our network of lakes – in July 2015, when she won a scholarship from Inventure to participate in the American

India Foundation (AIF) program, to study the impact of urban development on scarce resources. She was also part of the Inventure team that participated in the OLOV (an Inventure Change Maker initiative) aimed at students from AIF and Inventure doing an experiential case study on **Varthur Lake**, a 450-acre water body in Inventure’s vicinity.



The team’s findings through OLOV prompted Sahithi and her team to research the various factors that contribute to the pollution of our water bodies through surveys, sessions with experts, and interviewing people who live and work around the lakes, while carrying out regular testing on ten different Bangalore lakes, for over a year.

## Mobile Phone App

Sahithi developed an integrated mobile phone app and lake monitoring kit which is being used to visualize changing lake conditions by crowd-sourcing lake monitoring to citizens and students. All the collected data feeds into a live web-based water health map of the world which automatically indicates the status of each monitored water body.

Sahithi is at the University of Michigan pursuing an internship under Professor Lutgarde Raskin in the Environmental & Water Resources Engineering Centre within the Civil & Environmental Engineering Department

Sahithi’s work, along with hundreds of volunteers and citizens of Bengaluru, could result in the city regaining its lost glory as the city of lakes. Her contribution is special because success of any movement is possible only if civic activism is driven by technology and dynamic collaboration.





## Lake Warrior - Arun Krishnamurthy

By Vaani Anand

At 31, Arun Krishnamurthy has already quit a job at Google, set up Environmental Foundation of India (EFI), an NGO. In 10 years EFI has cleaned 83 lakes and the list of lakes to be cleaned is long

Arun didn't quit his fancy job because he was bored. "I quit my corporate career not because I didn't like what I was doing, but did so because I liked working for the environment even more!" Arun says excitedly. At work (in Google, Hyderabad) his manager pushed him to perform better at work and use the incentives to pursue his environment work. It set a model for him and gave him the confidence that he can still take care of himself and the environment without a full-time job.

EFI's primary objective is wildlife conservation and habitat restoration. It focuses on real-time and result-oriented environment conservation work. EFI has over 100 volunteers and is spread across 6 states and 2 union territories in the country.

As a child, Arun Lived in Mudichur, Chennai. He wanted to become a cardiologist but his academic grades didn't match the systems' expectations. "My school never pressurized me into becoming someone, they let me be myself which has helped me a great deal in life" says Arun. He went on to study Microbiology at Madras Christian College. "Confidence, leadership, a good job and a



Kapra Lake

beautiful wife, all these were given to me by my college MCC,” says Arun candidly. He went on to study at the Indian institute of Mass Communication, Jawahar Nehru University.

“Mudichur was the influence to lead me to doing what I am doing now. In 1993, when we moved there, we would see snakes and wild dogs. There was a lake and pond and when it rained, the water would flow through our street. But soon there was a

board announcing “Lake View Apartments”. The lake and the animals vanished. So did people during the floods of 2015.” All these events impacted me a lot.

The first ever lake clean-up was in May 2007. 87 people and 6 kids joined him. The Gurunadham Lake in Hyderabad was near his office and he felt very sad that it was so dirty. He got a few people together and started cleaning it. Slowly, the municipal workers joined. He was so impressed with their commitment that he organized a large truck to take away the waste cleared from the lake.

## Scientific Approach

Arun and his team follow a scientific approach towards cleaning and saving aquatic species. On wildlife conservation, the team is currently focusing on freshwater life forms, birds that are dependent on the lakes where many turtles live. Arun plans blocking access to any lake once cleaning is completed so that the aquatic plants and species are protected.

Krishnamurthy won the Google Alumni Impact Award in 2011 for restoring lakes in Hyderabad. The organization and its efforts grew from one pond in Chennai to include over 39 lakes and 48 ponds in Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, Telangana, Pondicherry and Gujarat in the last 10 years.

Arun is also involved in a 16-month project which not only provides physical garbage removal but also puts fencing around the lakes to protect them from human activities. Arun has further introduced an animal ambulance for street animals and established one animal rescue and a rehabilitation centre in Chennai and Hyderabad.

To Arun’s dismay, people don’t stop dumping waste, garbage, sewage and industrial waste in lakes. He has sometimes cleaned the same lake 47 times! In response to a question asking if he felt de-motivated, Arun responded: “No I don’t feel de-motivated. I am being rewarded in many ways. I get to know about nature, about insects, birds and various flora and fauna that inhabit these lakes. I meet both wonderful and not so wonderful people.”

## Self-funded

Arun believes in supporting his own foundation financially. His experience at Google taught him

that he could run a company and focus on saving the environment. He runs a market research company called Krish Infomedia. It is a Psephology firm that predicts election results. He says he has a track record of predicting most election results correctly.

Arun also does digital advertising and video production. He directed the documentary film 'Caught By', which focused on land, sea connection with fish in lake Kurma (2010). He received a British Council International Climate Champion Excellence Award for showing the poor condition of sea turtles and Elixir Poisoned (2011) which highlights the need to protect the aquatic environment. These business ventures help Arun fund all his environmental projects.

**Arun has set up 19 biodiversity parks in schools with the belief that the younger generation (below 15 years) respect nature for what it is and conserve it.**

EFI has a total of 11 fulltime, 4 part-time staff and several 100 volunteers. It is spread across 6 states and 2 union territories in India with a new branch in Sri Lanka as Environmentalist Foundation International.

Arun doesn't make much of the glitzy awards he's bestowed with. "Getting locked into one space and dimension is not worth it as we just have one life to live and so much to experience in this given time," is his counsel to executives.

The common man is his source of daily inspiration. "Every single individual who has volunteered on the ground is my inspiration. We tend to celebrate a few people but I see a star in every common man. Those who just get work done and don't claim anything big, are my daily dose of motivation."

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## Lithium Clocks 10 million Green Kilometers

**L**ithium Urban Technologies, founded in 2015 by **Sanjay Krishnan and Ashwin Mahesh** in Bangalore, have been able to add 10+ equivalent Cubbon Parks to Bangalore (200 Tonnes = 1 park). The all-electric cab service to businesses clocked total mileage of more than 10 million kilometers by mid 2017 and prevented release of 20,400,00,000 grams of carbon-di-oxide.

Lithium is India's first all-electric solution in the B2B segment. The company recently expanded operations to Delhi, which needs the most, being called out as one of the most polluted cities.

**The fleet size is 400+ EVs part of the fleet and currently in Bangalore and Delhi NCR with a tie-up with ten corporate.** Lithium has helped establish the fact that electric vehicles are the future of urban mobility in Indian cities and a viable solution for reducing pollution levels.

"There is a great demand to alter the environment we live in and it is not only the Government but the corporates too who are making a big effort to change the state we live in. The need to adopt greener ways has made corporates realise that following the EV way would make that change and thus create a larger impact in the environment," Praveen Salins senior executive at the company told **SustainabilityNext**.



Sanjay Krishnan and Ashwin Mahesh



Image Source:  
Corporate Eco Forum

# Google Wins C K Prahalad Award for Taking 1.2 Million Cars off the Road

The Corporate Ecoforum has honored three winners at its 10th Anniversary Leadership Retreat for exemplifying the fundamental connection between sustainability, innovation and long-term business success in a globalizing world

CEF presented the 2017 C.K. Prahalad Awards for sustainability leadership by an individual executive to **Urs Hölzle**, Senior Vice President of Technical Infrastructure for Google, and to **Renewable Energy Buyers Alliance (REBA)** for collaboration. The jury also extended an honorary award to **Dr. John B. Goodenough**, Professor in the Cockrell School of Engineering at The University of Texas at Austin. The awards were announced recently at the 10th Anniversary CEF Leadership Retreat, attended by senior executives representing CEF member companies with combined revenues of over \$3 trillion.



Hölzle was recognized for bringing about innovations and radical efficiencies in data center technology and increasing corporate purchasing of renewable energy, which have allowed Google to aggressively reduce greenhouse gas emissions. A pioneer in green data center design, Hölzle's leadership has resulted in significantly less energy used at Google data centers when compared to traditional data center designs. This is significant, because in aggregate, Google's cloud infrastructure consumes as much capacity as the city of San Francisco daily.

Hölzle has also played a key role in Google's 'moonshot' commitment to achieve zero waste to landfill for its global data center operations, diverting 86% of waste from such operations, and achieving 100% diversion rates at six data centers in 2016. **He has led Google to become the world's largest corporate purchaser of renewable energy, achieving 100% renewable energy and carbon neutrality for its global operations in 2017.** The company has signed



20 agreements totaling 2.6 gigawatts of renewable energy since 2010, generating emissions savings equivalent to taking more than 1.2 million cars off the road.

CEF's Founder, **MR Rangaswami** said: "To address the risks of climate change, we urgently need courageous vision and action from inside companies, as well as support from the very top. Urs has not only accelerated Google's sustainability, he has also cut a path for other companies to follow suit."

## **REBA for Power of Collaboration**

The Renewable Energy Buyers Alliance (REBA) has been awarded the C.K. Prahalad Award for demonstrating how collaboration is critical to widespread adoption of renewable energy. With an ambitious goal to facilitate and deploy 60 gigawatts of new corporate renewable energy in the U.S. by 2025, REBA has already demonstrated the power of their partnership.

REBA brings Rocky Mountain Institute's Business Renewables Center, World Wildlife Fund's Corporate Renewable Energy Buyers' Principles (supported by WRI), World Resources Institute's Charge Initiative and BSR's Future of Internet Power initiative together under one umbrella, providing a platform that meets the needs of buyers, developers, utilities, and regulators in a complex and ever-changing sector.

**RMI's Business Renewables Center is a member-based platform that streamlines and accelerates corporate purchasing of off-site, large-scale wind and solar energy. The initiative's 200 members have collectively completed over 7.5 GW of renewable energy deals.**

WWF's Corporate Renewable Energy Buyers' Principles, supported by WRI, outlines what corporate buyers want from the market to increase access to renewable energy, and engages utilities and utility regulators and policy makers to expand access in the US, Mexico, India and China. The 65 Buyers' Principles signatories represent over 48 million megawatt hours of annual demand by 2020.

WRI's Charge Initiative convenes companies and utilities in action-oriented partnerships to expand clean energy in China, India, the United States, and across Southeast Asia and Latin America.

BSR's Future of Internet Power initiative brings together companies to address challenges and collaborate on solutions that will enhance the ability to procure renewable energy to power data centers. **As of June 2017, more than 20 data center using companies and providers have demonstrated support for sustainable and clean energy practices through the initiative's Corporate Colocation and Cloud Buyers' Principles.**

P.J. Simmons, Chair of CEF, lauded the REBA partners for their vision, ambition and achievement: "REBA demonstrates what is possible when diverse stakeholders put their egos aside and work together to solve huge problems. The four partnering organizations are modeling what a successful collaboration looks like. We're proud that twenty-six CEF member companies are already part of REBA, and extend this award to them as well."



## Dr. John B. Goodenough – The 94-year old Battery Man

CEF extended an honorary C.K. Prahalad Award to Dr. John B. Goodenough. Beginning in the 1950s with the magnetic element that enabled the first random-access memory (RAM) of the digital computer, Goodenough's pioneering work helped bring to market the first rechargeable lithium ion battery,

essentially launching the wireless revolution. **Most recently, at the age of 94, he led a collaborative effort with M. Helena Braga of the University of Porto, Portugal and The University of Texas at Austin to develop a potentially game-changing battery cell.**

Uniquely cheap, lightweight, and safe, it is designed to be charged faster and last longer than current batteries allow—breakthroughs that could overcome the technological hurdles that have slowed down widespread adoption of electric vehicles and stationary energy storage. Another advantage is that the battery cells can be made from earth-friendly materials, substituting widely available sodium for lithium.

Goodenough holds faculty positions in the Cockrell School of Engineering's Department of Mechanical Engineering and Department of Electrical and Computer Engineering at UT Austin. He is the author of eight books and more than 800 journal articles, and he is the recipient of numerous national and international honors. Commending Goodenough for the award, CEF's Rangaswami reflected on his mentor C.K. Prahalad's strong belief in the power of imagination to guide executive leadership and spur innovation, "John Goodenough is evidence of imagination being put to work for the greater good. We're thrilled to recognize his lifetime of achievements and are hopeful that his latest discovery will have major implications for the future of sustainable battery storage."

### About the Award

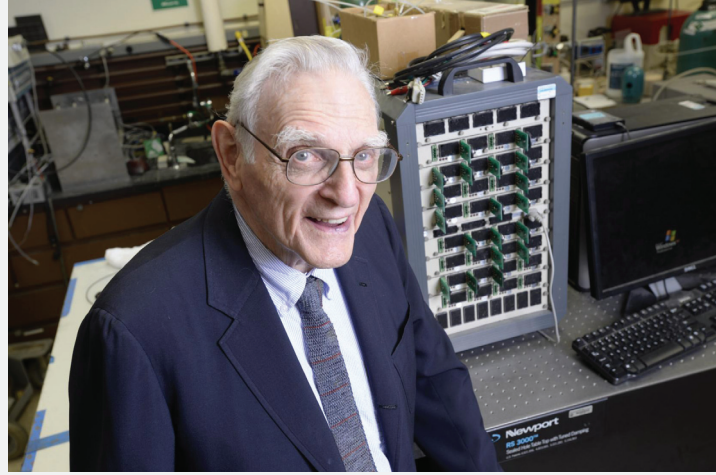


MR Rangaswami

The C.K. Prahalad Award was created to honor the vision and life's work of the late Dr. C.K. Prahalad. Toward the end of his career, Prahalad focused his enormous talent on the link between sustainability and long-term business success. In a 2009 *Harvard Business Review* cover story he co-authored with CEF founder **MR Rangaswami**, Prahalad argued that over the next decade "traditional approaches to business will collapse, and companies will have to develop innovative solutions. That will only happen when executives recognize a simple truth: **sustainability equals innovation.**" Prahalad was a senior adviser to CEF before his untimely death in 2010.

The C.K. Prahalad Awards were presented at the Cal Academy of Science, San Francisco, CA during CEF's 10th Anniversary Retreat, focused on "What If...?"

<http://www.corporatecoforum.com/meet-winners-2017-c-k-prahalad-award-global-business-sustainability-leadership/>



# Eleven Banks Pledge to Promote Climate Transparency

A group of 11 global banks representing over \$7 trillion, including **ANZ, Barclays, Bradesco, Citi, Itaú, National Australia Bank, Royal Bank of Canada, Santander, Standard Chartered, TD Bank Group and UBS** have joined a UN Environment-led initiative to improve their assessment and disclosure of climate-related risks and opportunities. They have agreed to work toward implementing the final recommendations issued by the Financial Stability Board's Task Force on Climate-Related Financial Disclosures (TCFD) that were tabled end of June 2017.

The report is expected to help in improving stakeholders' understanding of climate-related risks and opportunities. It's certainly helpful for financial institutions who will be better placed to help finance the transition to a more stable and sustainable economy low-carbon economy.

"The message from financial heavyweights is clear - climate change poses a real and serious threat to our economy," said head of UN Environment, Erik Solheim. "At the same time, there are enormous business opportunities in taking climate action. Transparency on how financial institutions mitigate the risks and seize the opportunities of a two degrees pathway is crucial to move international markets towards actively supporting a low-carbon and climate-resilient future."

TCFD was headed by Michael Bloomberg, Chairman, Founder and President Bloomberg L.P. Sole Indian in the 25-member group was Koushik Chatterjee, Group Executive Director, Finance and Corporate, Tata Group.

**After the G20, the issue now is about implementation: how can the finance industry put the framework into practice and deliver disclosure that is meaningful? Through this and other industry-led working groups UNEP FI is helping the finance sector to do just that: move from awareness to action.**



**Vasuki Shastry, Global Head, Public Affairs and Sustainability, Standard Chartered** said: "Climate change is a problem which requires global ambition and action; the work of the Taskforce on Climate-Related Financial Disclosures is an important step in delivering this. We look forward to working collaboratively through the UN Environment Program to explore how these disclosures can be practically implemented by the banking sector."

The UN Environment Finance Initiative is a partnership between UN Environment and the global financial sector created in the wake of the 1992 Earth Summit with a mission to promote sustainable finance. Over 200 financial institutions, including banks, insurers and investors, work with UN Environment to understand today's environmental challenges, why they matter to finance, and how to actively participate in addressing them.

## IKEA Foundation Announces €900,000 Design Award

IKEA Foundation has announced a unique design competition that aims to help families cope with the effects of climate change. The competition is supported by IKEA Foundation and Autodesk Foundation and is run by *What Design Can Do* <<http://www.whatdesigncando.com/>> (WD CD).

The contest invites the designers and creative entrepreneurs to submit innovative solutions to combat the impact of climate change. The winners will share an award package of €900,000. Interested candidates will be able to submit their entries by 24th September 2017.

More details here<<http://challenge.whatdesigncando.com/info/press/>> or use the hashtag #ClimateActionChallenge to follow the social media conversations.



## IMFA Received ET CSR Award

The Indian Metal Ferro Alloys Ltd (IMFA) has won the “Economics Times-KPMG – 2 GOOD 4-GOOD” Corporate Social Responsibility Distinction in Corporate Governance.

The Economic Times, along with KPMG in India as a knowledge partner has created “The ET 2 Good, 4 Good”, which is a certification scheme that certifies organizations based on their CSR performance, CSR processes and systems. This is the first edition of CSR rating that the Economic Times and KPMG have developed as the gold standard of the good work done in CSR domain by corporates.

This certificate is a recognition of IMFA's culture and commitment towards social transformation and its continued effort at upholding the decades old IMFA legacy of ‘touching lives beyond business through’ its CSR initiatives.

## World Wildlife Fund Grant for Pre-consumer Food Waste Research

The World Wildlife Fund has launched a research initiative that aims to identify and address the sources of pre-consumer food waste. The Foundation for Food and Agriculture Research and the Wal-Mart Foundation are supporting the research initiative through a \$1.3 million grant contribution. (<http://newfoodeconomy.com/food-waste-data-gap/>)



# LEAF Ties up with AP, Karnataka to Expand Horticulture Belt

The Government of India's revolutionary Farmer Producers Organization (FPO) idea of public-private partnerships for developing horticulture has new takers. The Ooty-headquartered Lawrencedale Agro Processing (Leaf) recently tied up with Governments of Andhra Pradesh and Karnataka and is in talks with the Tamil Nadu State Horticulture Department to expand its footprint.

Leaf is India's premier integrated fresh produce supply chain major. It says it sources ethically, aggregates, processes and distributes fresh produce to retailers in a branded, packaged format with highest hygiene, quality and food safety standards. It works with more than 3000 small land-hold farmers by improving yield quality through better crop inputs and techniques, assures them forward market linkages by avoiding multi-layers of intermediaries. It plans to expand its base to 10,000 farmers in the next three years.



**The Indian fresh produce scenario is dotted with vast number of small farmers who usually own less than 2 acres of land and are often caught in the vice-grip of intermediaries. On an average, there are at least 7 intermediaries with each earning 5-7 per cent margins.**

"Leaf will extend its expertise in crop cultivation and post harvest management to harness the market potential, thereby helping the farmers realize better income levels. We will bring our expertise in the entire value-chain of the harvest right from soil testing to seed selection, soil enrichment to input advise, inculcate improved tending practices. Leaf engages with the farmer in the entire life-cycle of the harvest and also for beneficial forward market-linkages," said **Palat Vijayaraghavan**, Founder & CEO, Lawrencedale Agro Processing.



# Vedanta's Nand Ghar Wins Best CSR Asia Practices Award

**N**and Ghar, the flagship CSR project of Vedanta Limited, a globally diversified natural resources company, was awarded the Best CSR practices Award by CMO Asia, a CSR body that supports practitioners and organizations globally to build responsible and sustainable business that contributes to sustainable development of society.



Vedanta Nand Ghar gets 'India CSR Project of the Year Award' Image Source: [indiacsr.in](http://indiacsr.in)

Vedanta Limited, in partnership with the Government of India's Ministry of Women and Child Development, plans to modernize around 4,000 anganwadis as Nand Ghar, which will focus on children's health and education and skilling women. Nand Ghars are a network of modern anganwadis with an integrated approach to child welfare and skill development for women.

Constructed using state of the art Schnell technology, the structure is fire, damp resistant, and earthquake proof. Nand Ghars are equipped with BaLA designs (Building as learning aid) and TV for delivering interactive learning for holistic development of children. Each cluster of Nand Ghars is equipped with a mobile health van to ensure primary healthcare for children, pregnant and lactating mothers.







View of Chitravathi River Image Source: Panoramio

## Treated Sewage To Revive 65 Bengaluru Lakes

**T**he much-awaited initiative to treat most sewage water for reuse is all set to take off in Bengaluru. This water will be diverted to fill up 65 lakes in Bengaluru Urban, Bengaluru Rural and Chikkaballapur districts. The foundation stone for the Rs 883-crore project at Devanahalli has been laid and the project is scheduled to be completed in less than two years.

A report in Deccan Herald stated that nine lakes in the Devanahalli taluk of Bengaluru Rural district, 12 in Bengaluru North taluk of Bengaluru Urban district and 44 in Chikkaballapur district would be covered under this project, which involves carrying 210 million litres per day (MLD) of treated sewage water through pipes. The project is expected to improve the ground water table significantly.

"This is a first-of-its-kind project in India," Minor Irrigation Minister **T B Jayachandra** told reporters. "The project implementation period is 18 months, but if we manage to get clearances faster, it will be completed before that." A similar project is under way in the Koramangala & Challaghatta valley to fill up the lakes of Kolar district, he added.

**Authorities hope the project would also help rejuvenate four dead rivers that originate right in Bengaluru's backyard - Uttara Pinakini, Dakshina Pinakini, Chitravati and Papagni. These rivers have been dead for nearly 20 years now.**



# SUSTAINABILITY 4.0 AWARDS

Frost & Sullivan and The Energy and Resources Institute (TERI) Initiative

Recognizing Excellence in Sustainable Development | 2017 MENASA Edition



*Congratulations to all the Award Recipients!*

## RECIPIENTS OF THE SUSTAINABILITY 4.0 AWARDS 2017

AWARD TITLE	WINNERS	LOCATION
Sustainable Corporate of the Year Award	Reliance Industries Limited	
Sustainable Factory of the Year Award	ITC Limited - India Tobacco Division	Bengaluru
Sustainable Factory of the Year Award - 1st Runners Up	Mahindra & Mahindra Limited	Igatpuri
Leaders Award - Mega Large Business	ITC Limited - India Tobacco Division	Ranjangaon
Leaders Award - Mega Large Business	Bharat Aluminium Company Limited	Korba
Leaders Award - Large Business	United Breweries Limited	Golconda
Leaders Award - Large Business	Henkel Adhesive Technologies India Private Limited	
Leaders Award - Medium Business	Johnson & Johnson Private Limited	Mulund
Leaders Award - Medium Business	UltraTech Cement Limited - Reddipalayam Cement Works	Ariyalur
Challengers Award - Mega Large Business	Hindalco Industries Limited	
Challengers Award - Mega Large Business	Genpact India	
Challengers Award - Mega Large Business	Yes Bank Limited	
Challengers Award - Mega Large Business	Bharat Petroleum Corporation Limited - Mumbai Refinery	Mahul
Challengers Award - Large Business	Hindustan Coca Cola Beverages Private Limited	Ameenpur
Challengers Award - Large Business	ACC Limited - Gagal Cement Works	Barmana
Challengers Award - Medium Business	Dr. Reddy's Laboratories Limited - CTO I	Hyderabad

INNOVATE

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COMMUNICATE

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PARTNERS**

**professional**  
AUTOCAR  
Essential reading for the Automotive Industry

**CARGOCONNECT**  
COMMERCIAL VEHICLE

**CV**  
COMMERCIAL VEHICLE

**ECARGOLOG**

**ecoconstruction**  
INDIA  
enabling services & technologies

**EM**  
EFFICIENT MANUFACTURING

**energetica**  
INDIA

**ManufacturingToday**  
DECISIVE TOOL FOR MANUFACTURING EXCELLENCE

**sustainabilitynext**  
conserve • profit

**The CEO Magazine**  
INDIA  
enabling services & technologies

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For Media Queries:

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Email: pallavi.singh@teri.res.in

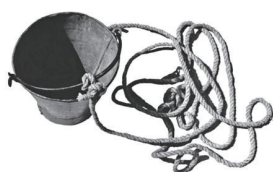
To know more visit - [www.frost.com/sustainability](http://www.frost.com/sustainability) | [www.teriin.org](http://www.teriin.org)

# BOOKSHELF

## DROUGHT BUT WHY?

How India can fight the scourge by abandoning drought relief

With a foreword by Sunita Narain



### **Drought But Why – How India can fight the scourge by abandoning drought relief**

Foreword by Sunita Narain

During 2014-2017 India was shaken by severe spells of drought that hit over 500 million people across geographical regions. Unlike in the past, these droughts did not spare the urban areas; metropolitan cities like Chennai, Hyderabad and Bengaluru declared water emergency and several towns resorted to water rationing.

“Drought But Why?” examines how an occupational hazard has turned into a human-made disaster of unmanageable proportion since organized agriculture began some 10,000 years ago. The book also delves into the experiences of several villages in chronic drought-prone areas of the country that remain unaffected by the scourge.

**These experiences show that India is a victim of its own policy that revolves around drought relief instead of working towards relief from drought in the long run. These villages offer the new commandments for drought management.**

## SWACHHA BHARAT for SWASTHA BHARAT Clean India for a Healthy India



### **Swachha Bharat for Swastha Bharat – Clean India for a Healthy India**

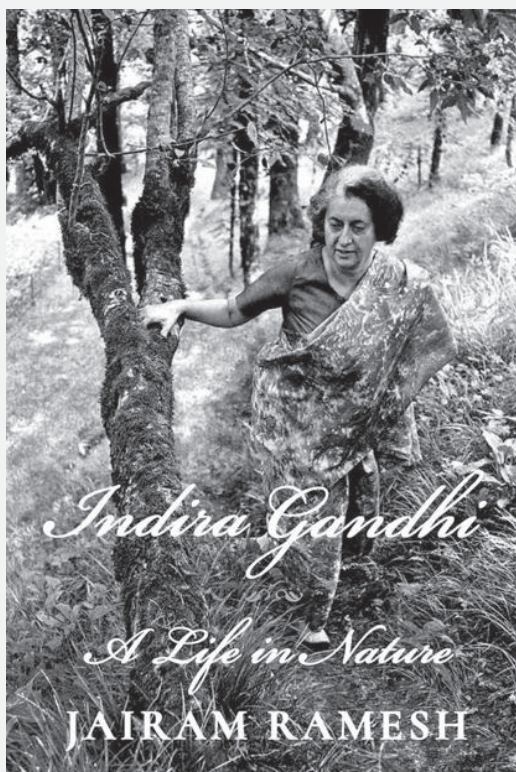
Dr. Nimish Shah, Sapna Ink, [sapnaonline.com](http://sapnaonline.com)

Mahatma Gandhi famously said “Sanitation is more important than freedom.” Yet, 70 years after Independence, half of Indians still defecate in the open. Public investment in healthcare and primary education has been the least and the results are there out in the open. The current movement is in the right direction, but needs greater execution excellence for it to succeed. For examples, building toilets is not a big deal, a system of maintaining it is more challenging.

The book rightly links sanitation with healthcare. If sanitation is improved significantly, healthcare costs would go down sharply. The author brings out various linkages quite well. Citizens need to apply intense pressure on public policy makers and implementers about this. Otherwise, India’s human development index will continue to linger around 130 for ever.

The author is a scientist with expertise across Microbiology, Water, Sanitation, & Hygiene and food safety.





## Indira Gandhi: A Life in Nature

By Jairam Ramesh, June 2017, Simon & Schuster India

Indira Gandhi, prime minister of India for sixteen years, was as charismatic as she was controversial—at once admired and criticized for her political judgments and actions. Yet beyond such debate, what has not been fully understood is her life-long communion with nature and how that defined her very being. Weaving personal, political and environmental history, politician-scholar Jairam Ramesh narrates the compelling story of Indira Gandhi, the naturalist.

He tells us why and how she came to make a private passion a public calling; how her views on the environment remained steadfast even as her political and economic stances changed; how her friendships with conservationists led to far-reaching decisions to preserve India's biodiversity; how she urged, cajoled and persuaded her colleagues as she took significant decisions particularly regarding forests and wildlife; and how her own finely-developed instincts and beliefs resulted in landmark policies, programs, initiatives, laws and institutions, that have endured.

Drawing extensively from unpublished letters, notes, messages and memos, the book offers a lively, conversational narrative of a relatively little known but fascinating aspect of Indira Gandhi's tumultuous life. Equally, the book acts as a compass to India at a time when the country faces the formidable challenge of ensuring ecological security and sustainability in its pursuit of high economic growth.



Jairam Ramesh is a Member of Parliament. He has held key ministerial portfolios between 2006 and 2014—rural development, drinking water and sanitation, environment and forests, power and commerce. He has authored a number of best-selling books including *Old History, New Geography: Bifurcating Andhra Pradesh* (2016), *To the Brink and Back: India's 1991 Story* (2015), *Legislating for Justice: The 2013 Land Acquisition Law* (2015), *Green Signals: Ecology, Growth and Democracy in India* (2015), *Making Sense of Chindia: Reflections on China and India* (2005) and *Kautilya Today: Jairam Ramesh on a Globalizing India* (2002).



## Courses - Degree/Diploma

### **M.Tech (Water Science and Governance)**

teri university

[http://www.teriuniversity.ac.in/index.php?option=com\\_program&task=program&sno=33](http://www.teriuniversity.ac.in/index.php?option=com_program&task=program&sno=33)

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### **M.Sc. (Water Science and Governance)**

teri university

[http://www.teriuniversity.ac.in/index.php?option=com\\_program&task=program&sno=34](http://www.teriuniversity.ac.in/index.php?option=com_program&task=program&sno=34)

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### **LLM (LLM programme with specialisation in Environment and Natural Resources Law and Infrastructure and Business Law)**

teri university

<http://www.teriuniversity.ac.in/llm-programme>

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### **M.A. (Public Policy and Sustainable Development)**

teri university

<http://www.teriuniversity.ac.in/masters-in-public-policy-and-sustainable-development>

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### **M.A. (Sustainable Development Practice)**

teri university

<http://www.teriuniversity.ac.in/masters-in-sustainable-development-practice>

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### **M.B.A. (Business Sustainability)**

teri university

<http://www.teriuniversity.ac.in/mba-business-sustainability>

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### **M.B.A. (Infrastructure)**

teri university

<http://www.teriuniversity.ac.in/mba-infrastructure>

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### **M.B.A. (Business Sustainability)**

teri university

<http://www.teriuniversity.ac.in/mba-business-sustainability>

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### **M.Sc. (Economics)**

teri university

<http://www.teriuniversity.ac.in/msc-economics>

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### **M.Sc. (Geoinformatics)**

teri university

<http://www.teriuniversity.ac.in/msc-geoinformatics>

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### **M.Sc. (Plant Biotechnology)**

teri university

<http://www.teriuniversity.ac.in/msc-plant-biotechnology>

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### **M.Sc. (Climate Science and Policy)**

teri university

<http://www.teriuniversity.ac.in/msc-climate-science-and-policy>

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### **M.Sc. (Environmental Studies and Resource Management)**

teri university

<http://www.teriuniversity.ac.in/msc-environmental-studies-and-resource-management>

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### **M.Sc. (Water Science and Governance)**

teri university

[http://www.teriuniversity.ac.in/index.php?option=com\\_program&task=program&sno=34](http://www.teriuniversity.ac.in/index.php?option=com_program&task=program&sno=34)

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### **M.Tech (Renewable Energy Engineering and Management)**

teri university

<http://www.teriuniversity.ac.in/mtech-renewable-energy-engineering-and-management>

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### **M.Tech (Urban Development and Management)**

teri university

<http://www.teriuniversity.ac.in/mtech-urban-development-and-management>

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### **M.Tech (Water Science and Governance)**

teri university

[http://www.teriuniversity.ac.in/index.php?option=com\\_program&task=program&sno=33](http://www.teriuniversity.ac.in/index.php?option=com_program&task=program&sno=33)

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### **Advanced PG Diploma (Renewable Energy)**

teri university

<http://www.teriuniversity.ac.in/apgdre4>

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### **MPhil/PhD in Disaster Studies**

Jamsetji Tata School of Disaster Studies

<http://www.tiss.edu/view/6/mumbai-campus/jamsetji-tata-school-of-disaster-studies/about-us-5/>

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### **M. A. / M. Sc. in Disaster Management**

Jamsetji Tata School of Disaster Studies

<http://www.tiss.edu/view/6/mumbai-campus/jamsetji-tata-school-of-disaster-studies/about-us-5/>

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<http://www.tiss.edu/view/6/mumbai-campus/jamsetji-tata-school-of-disaster-studies/about-us-5/>

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### **Master of Health Administration**

Jamsetji Tata School of Health System Studies

<http://www.tiss.edu/academics/schools-centres/>

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### **Master of Public Health (MPH) in Social Epidemiology**

Jamsetji Tata School of Health System Studies

<http://www.tiss.edu/academics/schools-centres/>

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**Send Names & Details About Courses Related With Sustainability  
to [ganesh.keerthi@gmail.com](mailto:ganesh.keerthi@gmail.com)**

## Events

### 8th Annual SICI 2017

August 16-18, 2017, Bangalore, India  
[www.nispana.com/sici](http://www.nispana.com/sici)

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### Bangalore Business Literature Festival

September 9, 2017, Bangalore, India  
<http://bangalorebizlitfest.org/>

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### Global Education, Research, and Technology for Sustainable Development

September 22-25, 2017, Coimbatore, India  
[subash.m@tauedu.org](mailto:subash.m@tauedu.org)

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### Conference and expo on iOS, Android, App Development, Artificial Intelligence, Virtual Reality, Internet of Things, Deep Learning

October 5-8, 2017, Bengaluru, India  
<https://inomics.com/go/Conference-and-expo-/979741>

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### ICIME 2017 9th International Conference on Information Management and Engineering

October 9-11, 2017, Barcelona, Spain  
<http://www.icime.org/>

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### Global Science, Technology & Innovation Conferences (G-STIC) 2017 - Student & Research Challenges

23-25 October 2017, Brussels  
[http://www.teriin.org/index.php?option=com\\_events&view=details&sid=917&Itemid=110](http://www.teriin.org/index.php?option=com_events&view=details&sid=917&Itemid=110)

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### RDCAPE – 2017 Recent Developments in Control, Automation & Power Engineering

26-27 October 2017, NOIDA, India  
<http://amity.edu/rdcape2017/>

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### CICT – 2017 Conference on Information and Communication Technology

03-05 Nov 2017, Gwalior, India  
[Http://cict2017.org](http://cict2017.org)

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### APPEEC – 2017 IEEE PES Asia-Pacific Power and Energy Engineering Conference

08-10 Nov 2017, Bangalore, India  
<http://www.ieee-appeec2017.org>

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### 3rd Economics Conference 2017

10-11 November 2017, Mysore, India  
<https://inomics.com/go/3rd-Economics-Confer/994075>

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### POWER WEEK

13 – 17 November 2017, Singapore  
[www.power-week.com](http://www.power-week.com)

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### IAIM – 2017 IEEE International Conference on Antenna Innovations & Modern Technologies for Ground, Aircraft and Satellite Applications

24 -26 Nov 2017, Bangalore, India  
<http://www.ieeeiaim2017.org>

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### 6th International Conference on “Paradigm Shift in Global Business Practices and Socio Economic Development”

9 Dec 2017, Hyderabad, India  
[conference@vsom.in](mailto:conference@vsom.in)

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### 3rd International Congress on Human Rights & Duties

10 Dec 2017, Hyderabad, India  
<https://inomics.com/3rd-international-congress-human-rights-duties-hyderabad>

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### ICTEE – 2017 International Conference on Transforming Engineering Education

13 -16 Dec 2017, Pune, India  
<http://www.ictee.in>

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### 59 ISLE Annual Conference

16-18 December 2017, Thiruvananthapuram, Kerala  
<https://inomics.com/59-isle-annual-conference-thiruvananthapuram-0>

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### ICPS – 2017 7th International Conference on Power Systems

21 -23 Dec 2017, Pune, India  
<http://www.icps2017.in>

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### Finance and Economics Conference 2017

28-29 December 2017, Kolkata, India  
<https://inomics.com/finance-and-economics-conference-2017-kolkata>

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### World Sustainable Development Summit 2018

February 15-17, 2018, New Delhi  
<http://wsds.teriin.org/>

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### RAIT – 2018 4th International Conference on Recent Advances in Information Technology

15 -17 Mar 2018, DHANBAD, India  
<https://inomics.com/>

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### BioProcess International European Summit

April 24-25, 2018, Netherlands  
<https://inomics.com/go/-BioProcess-Internat/1026975>

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**Send Your Events Plan to  
[ganesh.keerthi@gmail.com](mailto:ganesh.keerthi@gmail.com)**