

Annual Report

April 2014 – March 2015



2014

Travelers, there is no path, paths are made by walking

Antonio Machado

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Chairman's Message

Once More, With Feeling...

CSTEP is nine years young, and prospering, not just in the number of analysts it is able to attract, but in the kind of challenging problems it pursues. The mandates for Think Tanks are not well-defined and appear narrow. Academic problems are for the pursuit of colleges and universities; short-term projects are for consultancies. Between these, Think Tanks must look for projects that are relevant and with a good impact potential. CSTEP is successful on this count. For almost seven years, CSTEP is pursuing projects on energy issues. The scope of these projects is broad and rich: from energy efficiency studies to predicting national and regional energy needs. There are also specific ones such as studies on the viability of renewable energy systems including those that are coupled. The relevance and importance of these can be gauged from the fact that these are supported by funds from the European Union and an Indo-US joint programme.

How do cities grow and prosper? How can we make them smart, safe and clean? These are important questions, and the country is planning to build a number of 'smart' cities. CSTEP is already pursuing projects, supported by the Bill and Melinda Gates Foundation, on public hygiene. We are collaborating with a number of institutions in developing public toilet systems that are hygienic, environmentally clean and amenable for large-scale adaptation.

We live in a world of complex systems where solutions to problems are not simple but have many facets. In fact, there may not be a single or unique answer, but a set of answers with several conditionalities. How do we then choose the appropriate ones, mindful of the compromises the solutions invoke, from the plethora of options? CSTEP is engaged in building a decision making computer system (we call it DARPAN, the mirror) and looking eagerly for support from donors. It was the mathematician Pierre-Simon Laplace who famously proclaimed that to be worth it, must be countable. DARPAN is designed to provide this asset to decision makers.

There are many such projects that CSTEP can report of pursuing in 2014, with each one bringing a tale of its own. All these have been made possible by the unstinting support we are receiving from the International Development Research Centre (IDRC) and the OAK Foundation. These, along with the project supports from a number of institutions are sustaining our pursuit.

It was the Persian mystic who warned "Traveler, Beware. There is no road. Make one". CSTEP, as in the past years, is engaged in this pursuit, and is growing.



V.S. Arunachalam

Dr. V.S. Arunachalam, Chairman

Note from Executive Director

Dear Friends,

I am happy to say that the last year has been a year of satisfaction for all of us at CSTEP. It has been a year of considerable achievements and hard work, which is to be expected because we are a young and growing organisation. I say this with satisfaction because I believe we are on track to achieve our vision and mission of being a high quality policy research organisation. Every year at this juncture, we re-visit ourselves and ask the questions where are we going and what are our core values?

In that sense, I can think of three basic core values which are the pillars of CSTEP: one is research quality. I believe we should aspire for the highest standards in research quality and to me research quality means four levels: quality of work, quality of our writing, quality of presentation and quality of engagement with our stakeholders. I am happy to see that last year we spent considerable time and effort to put in processes to ensure highest quality of research. For instance, we have a rigorous peer-review system. We want to strengthen that, but it is work in progress and I am happy at the way we are progressing.

The second core value at CSTEP is developing outstanding policy professionals. Our aspiration is that CSTEP should be known by not one or two people, but by a large number of people who are experts and outstanding respected professionals in their respective domains. I am happy that last year we had requests from the Ministry of New and Renewable Energy, NITI Aayog and the Government of Karnataka to help prepare important reports and analyses, which were all done by my young colleagues.

The quality of a Think Tank is as good as the quality of its research staff. Therefore, it is inevitable for us to invest and help them develop and blossom as outstanding policy professionals. We also realised that people have different talents. Therefore, we feel that CSTEP should be a platform which allows them to develop and realise their talents, and blossom. For instance, some people will be very good in publishing research papers – they like to generate new knowledge, some people like to manage projects, there are others who like to write proposals and participate in fundraising, whereas there is one more category who likes to engage with policy makers and go for policy engagement. We would like CSTEP to be a platform where a person with whatever talents he or she has is able to utilise and develop them to the fullest possible, and this could be a combination of one or more of any of these attributes.

We undertook a very important initiative, which was, to strengthen the skills of the staff. Most of them come from different backgrounds; some are scientists, while others are engineers, economists, etc. We believe that policy research is a serious discipline and everybody in CSTEP should have a common set of skills which is required for this. Therefore, we organised a course in policy research skills, which spanned over 3-4 months. It's also heartening to note that this course was conducted internally, and our colleagues in CSTEP spent the desired time and effort to deliver the lectures. The lectures were very well attended and everybody participated with a lot of enthusiasm and spirit.

The third important issue in CSTEP is engaging with our stakeholders. I can say with satisfaction that this year, two of our donors, the International Development and Research Centre (IDRC) and OAK Foundation, which provide very crucial core grants to us, have renewed their faith and trust in CSTEP. Also, some of our funders who provide us with project-based funding have come back and supported us with new projects. This is an affirmation of their

faith in CSTEP and this is very important because at the end of the day, we are dealing with public money. And for somebody to come back to us and say that we are entrusting you with public money is a strong support of faith in our abilities. It also places an onus on us because we have to deliver to society knowledge and goods, which are much more in value than the money given to us, and that's something we try to imbibe – a spirit of humility.

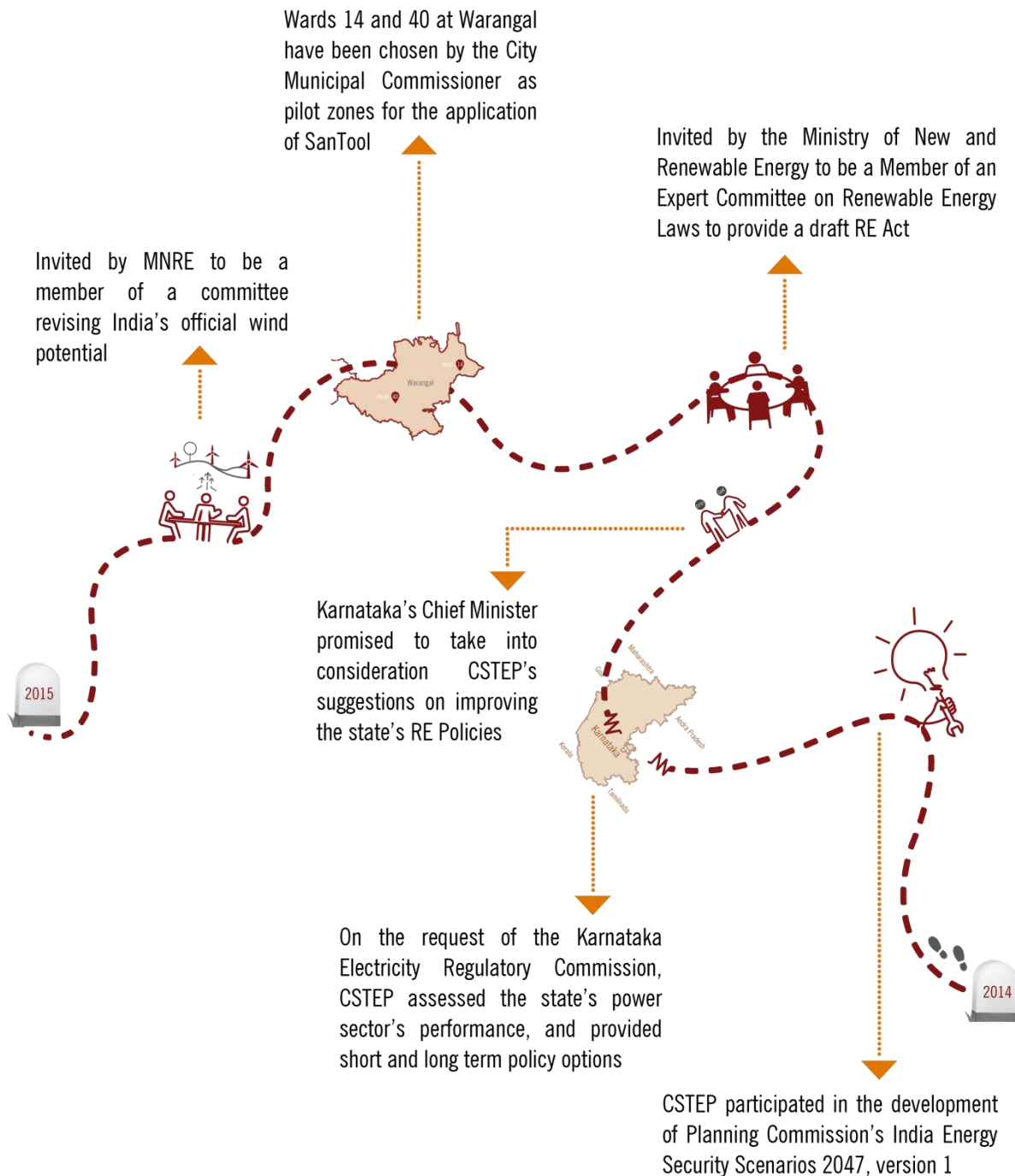
So, this my friends has been the journey of CSTEP in the last one year. There have been significant successes. Of course there has been a share of disappointments and failures as well, which is, as it should be in any organisation. But on the whole, we are on track in making CSTEP a well-respected, high quality policy research organisation with a spirit and a character.



Dr. Anshu Bharadwaj, Executive Director

Highlights of 2014-15

CSTEP's journey in 2014 resulted in direct Policy Impact:



A new year has started, but the work to influence policy is going on with the aim of achieving greater impact.

CSTEP's Expertise

CSTEP has expertise in several domains and has conducted evidence-based research, some of which have influenced policy making in India. The following section gives a brief about each expertise.

Energy



Energy Efficiency



Dr. Sharath Chandra Rao
Senior Research Scientist

The Bureau of Energy Efficiency is expanding the scope of the Perform Achieve and Trade (PAT) mechanism, also known as PAT Widening. This will include three more sectors - distribution companies, refinery sectors and railways. As a knowledge partner, CSTEP will assist in developing a methodology, framework and specific energy consumption targets for this initiative.

Publications



Chapter in Book

2014 April 11: Dr. S.S. Krishnan and Dr. N. Balasubramanian published a chapter titled "Metallurgical Production Technology" and sub-chapter titled "Planning the metallurgical production plant" in *Treatise on Process Metallurgy*.

Newspaper Articles

2014 July 15: PAT Energy Efficiency Policy Working Well by Dr. S.S. Krishnan in *Sustainability Next*.
August 18: Steel Industry Energy and Emissions Outlook 2020 by Shyam Sunder P. in *Steel Guru*.

Engagements



Conferences

2014 September 24-25: Venkatesh Vunnam attended a conference on *Cost Reduction Strategies in Thermal Power Plant Operation and Maintenance (O&M)* organised by Mission Energy Foundation in Mumbai.

Workshops

2014 July 18: Mohd. Sahil Ali attended a workshop on *Improving Fly Ash Utilisation in the Cement Industry: A Resource Efficiency Approach* organised by Mission Energy Foundation and Fly Ash Association of India, and supported by Ministry of Power, Ministry of Urban Development, and Central Pollution Control Board in New Delhi.

Nuclear Power

Reports 

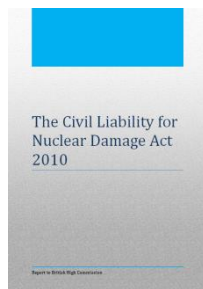
Publications

Newspaper Articles

2014 September 9: Whither Nuclear Power by Dr. Anshu Bhardwaj and Prof. Rajgopal S. in *Business India*.

October 26: (Why) Are we biased about nuclear power? by Nihit Goyal in *Economics Times*.

2015 February 06: More than liability, n-energy costs need to be addressed by Prof. Rajgopal S. and Debapriya Das was published by *IANS* and republished in more than 8papers.



2014 October 28: *Civil Liability for Nuclear Damage Act, 2010: A Primer for the British Nuclear Industries* by Debapriya Das and Prof. Rajagopal S.

Smart Grids

Publications and Engagements

Newspaper Articles

2014 September 03: Blackout FAQs included contribution by H.S. Ramakrishna in *Mumbai Mirror*.

Workshops 

2014 September 11-12: Vaishalee Dash and Mohd. Saquib attended a workshop on *Smart Initiatives in Energy Systems* organised by IEEE Power and Energy Society (PES) Bangalore Chapter at GE – John F. Welch Technology Centre in Bengaluru.

Solar Studies



Dr. Sharath Chandra Rao
Senior Research Scientist

A study, titled *Addressing the Challenges to Renewable Energy Manufacturing in India*, examined if India can domestically manufacture solar and wind energy technologies, in the backdrop of the National Solar Mission. The study was supported by Shakti Sustainable Energy Foundation.

Activities - At a Glance



Publications



Newspaper Articles

2014 August 02: Karnataka's New Solar Policy Packs Punch by Saptak Ghosh in *Sustainability Next*.

2015 January 06-19: Hybrid CSP-Biomass project to be built in India was published by *CSP World* and republished twice.

January 29- February 13: India's ambitious off-grid solar targets achievable by Vaishalee Dash, Pooja Vijay Ramamurthi, Saptak Ghosh was published by *IANS* and republished in more than 15 papers.

March 09: Can India achieve its 100 GW solar target by Saptak Ghosh, Pooja Vijay Ramamurthi, Vaishalee Dash and Nagalakshmi Puttaswamy was published by *IANS* and republished in more than 10 papers and blogs.

Journal Articles

2014 May 24: Quantifying PV Power Variability Using Lorenz Curve by Abhik Das in *Journal of Renewable & Sustainable Energy*, AIP, Volume 6, Issue 3.

September 17: Methodology for Design of Solar Field for Parabolic Trough Technology with Thermal Storage and Hybridization by Suresh N.S., Thirumalai N.C., Badri S. Rao and Prof. Ramaswamy in *Solar Energy*.

September 28: An Empirical Model for Ramp Analysis of Utility-scale Solar PV Power by Bishal M. Mazumdar, Mohd. Saquib and Abhik Das in *Solar Energy*, Volume 107.

November 15: Techno-economic Review of Rooftop Photovoltaic Systems: Case Studies of Industrial, Residential and Off-grid Rooftops in Bangalore, Karnataka by Saptak Ghosh, Akhilesh Nair, Dr. S.S. Krishnan in *Renewable and Sustainable Energy Reviews*.

2015 February 27: Challenges and Opportunities for Solar Tower Technology in India by Srilakshmi G., Venkatesh Vunnam, Thirumalai N.C., Suresh N.S. in *Journal of Renewable and Sustainable Energy Reviews*.

Engagements



Conferences

2014 August 16: Nagalakshmi Puttaswamy attended a conference on *PPA and its challenges on solar and wind* organised by Cerebral Business Research in New Delhi.

Workshops

2014 April 01-02: The SERIUS team attended a symposium on *Research Directions in Solar Energy-2014* organised by the Indian Institute of Science in Bengaluru.

April 03-04: Vaishalee Dash and Srilakshmi G. attended a conference on *Short-Term CEP Course on PV Module Reliability* organised by SERIUS at IIT Mumbai.

April 29-30: Suresh N.S. attended a workshop on *Roadmap for Scaling-up Deployment of Decentralised Solar Thermal Technologies in India* organised by the Ministry of New and Renewable Energy and Shakti Sustainable Energy Foundation in Pune.

June 13-15: Thirumalai N.C and Dr. Mridula D. Bhardwaj attended the *SERIUS Workshop* in the USA.



Panel Discussion at July 3 Workshop

July 3: CSTEP, WISE and Shakti Sustainable Energy Foundation organised a workshop on *Challenges to*

Scale-up Renewable (Solar) Energy Manufacturing Industry in India: Horizon 2032 in Bengaluru.

July 8: Bhupesh Verma attended a workshop on *Challenges to Scale-up Renewable (Wind) Energy Manufacturing Industry in India* organised by WISE in Pune.

November 19: Dr. S.S. Krishnan, Bishal M. Mazumdar and Vaishalee Dash attended a workshop on *Future of the Grid* organised by World Resources Institute and Prayas Energy Group in Bengaluru.

Outreach



Webinars & Podcasts

2014 October 30: *Technical Assessment of Thin Film Solar Cells* by Vaishalee Dash.

2015 March 25: *Co-gen Technologies and RE Development in India* by Thirumalai N.C.

CSTEP in Media

2014 July 4: Govt. Must Support Solar Enterprises was published in more than 3 papers.

August 4-12: Union Govt plans to set up 25 Solar Parks was published in more than 4 papers.

December 05-10: Indigenous 3MW solar power plant project launched in rural Bihar was published by *IANS* and republished in more than 16 papers.

Wind Power



Deepthi Swamy
Senior Research Engineer

On the request of the Ministry of New and Renewable Energy (MNRE), a framework was developed for the National Wind Energy Mission in consultation with various stakeholders involved in the generation and distribution of wind-generated power. This framework was submitted to MNRE in the form of a draft Mission document.

Activities - At a Glance



Publications



Newspaper Articles

2014 October 08: National Wind Energy Mission by Deepthi Swamy in *Energy Next*.

2015 March 09: Harnessing India's wind power potential by Deepthi Swamy in *Ideas for India*.

Engagements



Conferences

2015 February 15-17: Ashish Nigam, Riya Rachel and Meera Sudhakar participated in *RE-Invest Expo 2015* organised by the Indian Renewable Energy Development Agency and Ministry of New and Renewable Energy in New Delhi.

Workshops

2014 April 25: Dr. Anshu Bharadwaj, Meera Sudhakar and Ashish Nigam attended a conference to *Welcome IEDCL to the FOWIND Consortium & Launch of Project Website* organised by the FOWIND consortium in New Delhi.

April 28: Deepthi Swamy attended a workshop on *Technical Assistance for Development and Deployment for Clean Energy in Karnataka* organised by Partnership to Advance Clean Energy - Deployment (PACE-D) Technical Assistance Program in Bangalore.

August 06: Nihit Goyal and Pooja Vijay Ramamurthi attended a meeting on *Renewable Energy Landscape: Key Issues, Gaps and the Way Forward in Select Indian States* organised by Climate Parliament in New Delhi.

September 11: CSTEP organised a *Sensitisation Workshop for Stakeholders of Offshore Wind Power in India* in Chennai.



Proceeding at March 9 Workshop

2015 March 09: CSTEP co-organised with Shakti Sustainable Energy Foundation and Idam Infrastructure Advisory Ltd. the *Fourth Wind Discussion Forum* in Bengaluru.

Outreach



Webinars & Podcasts

2014 April 11: *Example Application of Monte Carlo Methods for Uncertainty Analysis* by Deepthi Swamy.

2015 February 13: *Pre-feasibility Analysis of Offshore Wind Energy in Tamil Nadu* by Ashish Nigam.

CSTEP in Media

2014 July 04: IL&FS Energy joins Indian first ever offshore wind project for energy published by *Steel Guru*.

September 12: India advances offshore ambitions was published in more than 7 papers.

2015 January 29: Tapping the offshore wind was published by *The Hindu*.

March 10: Press Release titled Wind energy industry seeks stable policy was published in more than 7 papers.



THE HINDU RECHARGE

Energy Policy



Dr. S.S. Krishnan
Principal Research Scientist



Dr. Gaurav Kapoor
Senior Research Scientist



Nihit Goyal
Research Scientist



Meera Sudhakar
Research Scientist

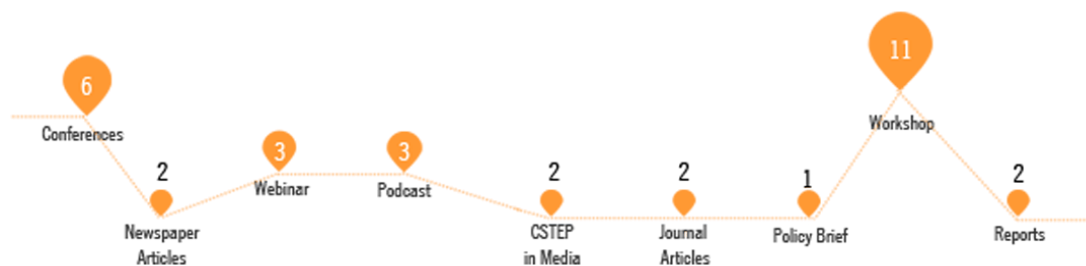
Our engagement with Low Emission Development Strategy (LEDS) has given us an opportunity to network with a large number of experts in Asia and learn about global best practices. At the Global LEDS Meeting, CSTEP presented its work on Karnataka's Green Economy Strategy. This work was appreciated for the use of a multi-approach viewing of renewable energy and its developmental co-benefits.

We are also making headway in working on the geo-spatial analysis of RE potential in India. This study is supported by the National Institution for Transforming India (NITI) Aayog.

CSTEP is a knowledge partner in the development of NITI Aayog's India Energy Security Scenarios 2047 (IESS 2047) tool. Outreach workshops in Chennai, Bangalore and Noida for the first version of the tool were organised. IESS 2047 is expected to play a major role in the upcoming National Energy Policy to determine India's climate policy options in the short and long-term future.

We published a report titled RE-energising Karnataka, at the end of a Climate Parliament funded project. The report identified barriers in Renewable Energy growth in Karnataka and the shortcomings in performance relative to other states in India. The report was well received and a Policy Brief was submitted to the State Energy Department and the Chief Minister.

Activities - At a Glance



Publications



Newspaper Articles

2014 September 2: Industry gears-up for renewable energy exhibition was published in *The Times of India*.

November 19: Oman-India gas pipeline a most promising option by H.S. Ramakrishna in *IANS*.

Journal Articles



2014 April 22 and 24: 'Sustainability' in the Next Development Agenda: The Case of Energy Access (Part 1 & 2) by Nihit Goyal, Shweta Srinivasan, Mohd. Sahil Ali in *Southern Voice Initiative*.

September 21: Logistics Cost Analysis of Rice Residues for Second Generation Bioenergy Production in Ghana by Pooja Vijay Ramamurthi, Maria Cristina Fernandes, Per Sieverts Nielsen, Clemente Pedro Nunes in *Bioresource Technology*.



Cover Pages of Journals



Reports

2014 June 03: *Final Report of the Expert Group on Low Carbon Strategies for Inclusive Growth* by Nihit Goyal, Shweta Srinivasan, Mohd. Sahil Ali, Shyam Sunder P., Dr. S.S. Krishnan, Saptak Ghosh, Deepthi Swamy, Bishal M. Mazumdar, Mohd. Saquib, Meera Sudhakar, Thirumalai N.C. and Sharath Rao.

November 14: *RE-Energising Karnataka: An Assessment of Renewable Energy Policies, Challenges and Opportunities* by Meera Sudhakar, Pooja Vijay Ramamurthi and Radhika Sharma.

Policy Briefs

2014 November 20: *RE-Energising Karnataka: An Assessment of Renewable Energy Policies, Challenges and Opportunities* by Meera Sudhakar, Pooja Vijay Ramamurthi and Radhika Sharma (in English and Kannada).

Engagements



Conferences

2014 August 04: CSTEP organised a *Workshop on Energy Secure Outlook for India: IESS 2047* in Bengaluru.



Presentation at August 4 Workshop

August 08-09: Dr. Anshu Bharadwaj attended the *Tenth India Innovation Summit 2014: Innovation for Inclusive Growth* organised by CII in Bengaluru.

August 14: Mohd. Sahil Ali, Dr. Jai Asundi, Deepthi Swamy, Dr. S.S. Krishnan, Shyam Sunder P. and Nihit Goyal attended the *Consultation Workshop for Phase 2 of the IESS 2047 Tool* organised by CSTEP.

August 28: Dr. S.S. Krishnan attended a conference on *Impacts Assessment and Benefits Communication Resources* organised by LEDES in Ethiopia.

2015 February 10-12: Mohd. Sahil Ali attended the *International Conference on 2050 Calculator* organised by UK DECC, Industrial Technology Research Institute, Taiwan, Institute for Global Environment Strategies, Japan, and Ministry of Economic Affairs in Taiwan.

February 16-17: Shweta Srinivasan attended the *Southern Voices Conference* organised by the Southern Voices Initiative in Istanbul.

Workshops

2014 April 29: Nihit Goyal, Mohd. Sahil Ali attended a workshop on *Energy Modelling, Sustainable Growth Working Group, Indo-US Energy Dialogue* organised by Planning Commission in New Delhi.

June 13: Dr. S.S. Krishnan, Shweta Srinivasan and Dr. Annapoorna Ravichander attended a workshop on *Energy Secure Outlook for India: IESS 2047* organised by Tamil Nadu Energy Development Agency (TEDA) in association with the Planning Commission and CSTEP in Chennai.

June 24-25: Nihit Goyal and Mohd. Sahil Ali attended the *International Workshop on Space Cooling DR* in New Delhi.

July 16: Dr. S.S. Krishnan, Deepthi Swamy and Nihit Goyal attended a *Consultation Workshop on Version 2 of IESS 2047* organised by Planning Commission in New Delhi.

July 15-16: Debapriya Das and Deepthi Swamy attended *The India Policy Forum* organised by the National Council of Applied and Economic Research (NCAER) and Brookings Institution in New Delhi.

August 26-28: Mohd. Sahil Ali attended the *South-Asia Consultation on the Post-2015 Development Agenda: Sustainable Development Goals and the Means of Implementation* organised by UNDP Resident Representative Nepal, SAARC, ESCAP and ADP in Nepal.

August 29: Dr. S.S. Krishnan attended the *Asia LEDS Partnership* workshop organised by LEDS in Addis Ababa, Ethiopia.

October 08-09: Dr. S.S. Krishnan and Nihit Goyal attended the *IESS 2047 Version 2* workshop organised by CII and Prayas in Pune.

December 04: Saptak Ghosh presented a paper at the *Waste Management India Summit 2014* organised by Prospur Events in New Delhi.

2015 January 6-7: Mohd. Sahil Ali attended a *Consultation Workshop on Version 2 of IESS 2047* organised by NITI Aayog in New Delhi.

February 18: Amit Kanudia, Meera Sudhakar and Nihit Goyal attended a Roundtable Workshop titled *Towards a Robust Development Focused INDC for India* organised by Centre for Policy Research in New Delhi.

Outreach



Webinars & Podcasts

2014 May 02: *Unintended Consequences of Public Policies* by Nihit Goyal.

November 27: *RE-Energising Karnataka: An Assessment of Renewable Energy Policies, Challenges and Opportunities* by Pooja Vijay Ramamurthi.

2015 January 13: *India's Shale Gas Potential* by Murali Ramakrishnan.

January 29: *Understanding Green Jobs and Debunking some Myths* by Shweta Srinivasan.

March 11: *Global Drive for Sustainable Growth and India's Contribution* by Dr. S.S. Krishnan.

CSTEP in Media

2014 September 22: Climate Parliament pushes renewable energy agenda in Karnataka was published in *The Times of India*.

December 20: State renewable energy policy is a paper tiger: C-STEP was published by the *Economics Times*.



Infrastructure



Anantha Lakshmi P
Senior Research Engineer

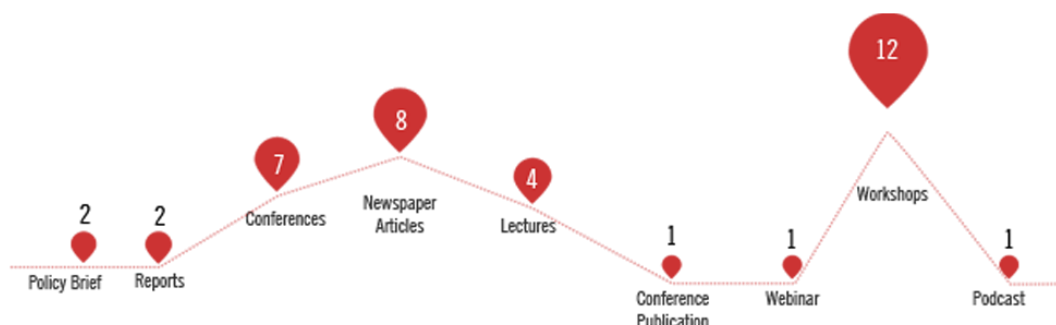


Sujaya Rathi
Principal Research Scientist

We conducted a review on the transport situation in Karnataka. The report brought out some key recommendations including the need to increase public transport, work with BMTC to look at innovative finance mechanisms, and focus on smaller cities which are emerging as energy hotspots.

A Proof-of-Concept tool, called SanTool, was developed to help policy makers address various aspects of sanitation services when choosing investment options. This was supported by the Bill and Melinda Gates Foundation.

Activities - At a Glance



Publications



Newspaper Articles

2014 April 02: Planning for a climate-resilient city by Shrimoyee Bhattacharya and Sujaya Rathi in *India Together*.

October 13: Smart Cities - an opportunity for sustainable urban development by Sujaya Rathi and Shrimoyee Bhattacharya in *India Together*.

November 10: Smart Decisions for a Sustainable City by Shrimoyee Bhattacharya and Sujaya Rathi in *Sustainability Next*.

November 30: Our right to walk: Where have all the footpaths gone by Sujaya Rathi and Shrimoyee Bhattacharya in *FIRSTPOST*.

2015 January 08: Think Beyond Building Toilets by Sujaya Rathi in *Sustainability Next*.

March 10: Target Sustainability, Become Smart by Sujaya Rathi and Shrimoyee Bhattacharya in *Infrastructure Today*.



Reports

2014 October 16: *Platform for Integrated Sanitation Investment Planning* by Sujaya Rathi and Dr. Jai Asundi.

November 25: *Review of Urban Transport in India* by Sujaya Rathi and Shrimoyee Bhattacharya in association with Institute of Urban Transport.



Conference Publication

2015 January 09-11: Shrimoyee Bhattacharya and Sujaya Rathi presented '*Achieving Regional Inclusiveness through Smart Cities: Case of Karnataka*' in the 63rd National Town and Country Planners Congress conference in Chennai.

Policy Briefs

2014 October 27: *Building Smart Cities in India - An Opportunity for Strategising Urban Development* by Sujaya Rathi and Shrimoyee Bhattacharya.

November 10: *Urban Transport Focus - Small and Medium Sized Cities* by Sujaya Rathi and Shrimoyee Bhattacharya.



Policy Briefs on Infrastructure

Engagements



Conferences

2014 November 14-15: Sujaya Rathi attended the *Urban Age Conference on Governing Urban Futures* organised by London School of Economics and Political Science and the Alfred Herrhausen Society, the International Forum of Deutsche Bank, in partnership with National Institute of Urban Affairs in New Delhi.

November 18-19: Sujaya Rathi attended a conference on *US-India Technology Summit* organised by the Embassy of the United States of America in Greater Noida.

November 25-28: Sujaya Rathi attended *The Annual Urban Mobility Conference* organised by Institute of Urban Transport in New Delhi.

2015 January 9-11: Shrimoyee Bhattacharya and Sujaya Rathi attended the *63rd National Town and Country Planners Congress* organised by Institute of Town Planners, India in Chennai.

January 18-23: Sujaya Rathi attended the *3rd International Faecal Sludge Management Conference 2015* organised by World Smart Capital Initiative in Hanoi.



Sujaya Rathi Speaking at January 18-23 Conference

March 25: Anantha Lakshmi P. attended a *Smart Mobility Seminar* organised by Center for infrastructure, Sustainable Transportation and Urban Planning (CiSTUP) in Bengaluru.

March 24-26: Sujaya Rathi and Shrimoyee Bhattacharya attended a three day *India Grantee and Partner Convening on Water, Sanitation and Hygiene (WSH) programme* organised by Bill and Melinda Gates Foundation (BMGF) in New Delhi.

Workshops

2014 May 5: Shramana Dey and Sujaya Rathi attended a workshop on *Technology Options for Decentralized Wastewater Management* organised by CDD Society, BORDA and Rajiv Gandhi Rural Housing Corporation Ltd in Bengaluru.

July 29-31: Sujaya Rathi and Anantha Lakshmi P. attended a workshop on *Water, Sanitation and Hygiene Advocacy Partners Convening* organised by BMGF in Kenya.

August 1: Shrimoyee Bhattacharya attended a workshop on *Urban Policy Dialogues 2014* organised by Indian Institute of Human Settlements (IIHS) in Bengaluru.

September 16: Sujaya Rathi and Shrimoyee Bhattacharya attended the *Delhi Sustainable Development Summit, 2015: Regional Dialogue* organised by The Energy and Resources Institute (TERI) in Bengaluru.

September 26: Sujaya Rathi and Shrimoyee Bhattacharya attended a Training Need Assessment Workshop for *Developing Module on Capacity Building on Climate Change* organised by EMPRI (Environmental Management & Policy Research Institute) in Bengaluru.

September 27: Sujaya Rathi attended a *Colloquium on Urban Resilience* organised by Public Affairs Centre (PAC) in Bengaluru.

September 29: Sujaya Rathi and Shrimoyee Bhattacharya attended a workshop on *Proposal to Setup a Coalition/Consortium of Smart Cities* organised by CSD in Bengaluru.

October 7– 8: Sujaya Rathi attended a workshop on *Mobility for Smart Cities* organised by Center of Excellence in Urban Transport in Chennai.

2015 January 30: Sujaya Rathi and Shrimoyee Bhattacharya attended a training cum workshop on *Climate Change on Urban- Risk Vulnerability & Adaptation Measure* organised by EMPRI in Bengaluru.

February 19: Mohd. Sahil Ali and Shrimoyee Bhattacharya attended a workshop on *Sustainable Energy Transitions in Bengaluru* organised by University College London (UK) in collaboration with Gubbi Labs in Bengaluru.

February 23: Shrimoyee Bhattacharya attended a workshop on *Urban Water Systems in India* organised by Indian Council for Research on International Economic Relations in New Delhi.



Lectures

2014 October 16: Shrimoyee Bhattacharya attended a talk by Dr. Anjali K. Mohan on *From Hierarchy to Heterarchy in the Information Age* organised by IIHS in Bengaluru.

November 5: Shrimoyee Bhattacharya delivered a talk on *Incorporating Demographic Shifts in the Planning Process* at R. V. College of Architecture in Bengaluru.

2015 January 15: Sujaya Rathi delivered a talk on *Sanitation Challenges in India and Way Forward* at the Asian Institute of Technology in Thailand.

March 23: Anantha Lakshmi P., Subhrajit Debnath and Chaitanya Kanth attended a guest lecture series on *Smart Mobility* organised by CiSTUP, IISc in Bengaluru.

Outreach



Webinars & Podcasts

2014 June 26: *A Decision Support Tool for the Indian Urban Sanitation Sector* by Shramana Dey.

November 12: *Planning For Smart Urbanisation in Karnataka, India* by Shrimoyee Bhattacharya.



Security Studies



Dr. Jai Asundi
Principal Research Scientist

In the area of Security Studies we use Geographic Information Systems (GIS) and other models to study and understand Emergency situations. We also work with doctors from M.S. Ramaiah Medical College to develop tools for emergency training. We are engaged with the DRDO on developing tools for emergency and disaster management.

Engagements



Conferences

2014 May 06-08: Dr. Jai Asundi attended the *Regional Conference on Trade in Value-Added, Global Value Chains and Development Strategy* organised by the Asian Development Bank Institute (ADBI) along with the S. Rajaratnam School of International Studies, Nanyang Technological University in Singapore.

September 09: Sayani Saha and Pareexit Chauhan attended a workshop on *GIS Developer Summit 2014* organised by Esri India in Bengaluru.

2015 February 27-28: Ranganathan P., Subhrajit Debnath and Chaitanya Kanth attended a workshop on *Big Data Analytics* organised by Sri Ramakrishna Engineering College in Coimbatore.

Workshops



2014 September 12-16: Dr. Gaurav Kapoor and Dr. Jai Asundi attended a conference on *Robust Decision Making (RDM) Training Workshop* organised by START and hosted and facilitated by the Shanghai Climate Change Research Center in Shanghai.

Outreach



Webinars & Podcasts

2015 February 26: *Effective Disaster Management in India* by Dr. Gaurav Kapoor.



New Materials



Dr. Mridula D. Bharadwaj
Principal Research Scientist

Last year, we worked on the development of new cathode and anode materials for Lithium ion and Sodium ion battery systems. After formulating the theoretical models of these materials, we collaborated with laboratories to test them. The goal is to develop low cost and safe battery materials so that their penetration into large-scale, commercial usage in electric vehicles and renewable energy applications becomes possible.

Activities - At a Glance



Publications



Newspaper Articles

2014 June 18: Energy Storage for the Indian Power Grid by Bishal M. Mazumdar and Dr. Mridula D. Bharadwaj in *Sustainability Next*.

Journal Articles



2014 May 11: Infiltration Velocity and Thickness of Flowing Slag Film on Porous Refractory of Slagging Gasifiers by Ramalakshmi Krishnaswamy, Tetsuya Kenneth Kaneko, Bishal M. Mazumdar, Peter Rozelle, Seetharaman Sridhar and John Kuhlman in

ASME Journal of Energy Resources Technology, Vol. 136, Issue 3.

October 27: A Neural Network based Approach to Predict High Voltage li-ion Battery Cathode Materials by Tanmay Sarkar, Alind Sharma, Abhik Das, Dipti Deodhare and Dr. Mridula D. Bharadwaj in *IEEE*.



Cover Pages of Journals

Engagements



Conferences

2014 August 07-09: Dr. Mridula D. Bharadwaj, Dr. Parveen Kumar, Vinay Kandagal and Ganeshprasad Pavaskar presented papers at the *ICONEST Conference* organised by Indian Institute of Science in Bengaluru.

November 05: Dr. Mridula D. Bharadwaj and Dr. Sharath Chandra Rao presented a paper at the *Solar Energy Investment & Technology Forum 2014* organised by KREDL in Bengaluru.

December 14-18: Vinay Kandagal, Dr. Mridula D. Bharadwaj and Dr. Umesh Waghmare presented a poster at the *13th Eurasia Conference on Chemical Sciences* organised by the Indian Institute of Science in Bengaluru.

December 14-18: Tanmay Sarkar, Dr. Parveen Kumar and Dr. Mridula D. Bharadwaj presented 'Comparative Analysis of Electrochemical Properties of LiMO_2 , LiMSiO_4 and LiMPO_4 (M=Fe, Co and Mn): A First Principles Study' at the *13th Eurasia Conference on Chemical Sciences* organised by the Indian Institute of Science in Bengaluru.

December 18-20: Dr. Parveen Kumar, Dr. Mridula D. Bharadwaj and S. Yashonath presented a paper at the *14th Theoretical Chemistry Symposium (TCS2014)* organised by CSIR- National Chemical Laboratory (CSIR-NCL) in Pune.

Workshops

2015 January 15-17: Dr. Parveen Kumar, Tanmay Sarkar and Vinay Kandagal attended the *Winter School on Materials and Processes for Applications in Energy and Environment* organised by ICMS, JNCASR in Bengaluru.

Outreach



Webinars & Podcasts

2014 October 20: *Renewable Energy Integration and Storage* by Bishal M. Mazumdar.

2015 March 2: *How Electrolyte Influence the Battery Performance* by Dr. Parveen Kumar.



Climate Studies



Dr. Sujatha Byravan
Principal Research Scientist



Dr. Sharath Chandra Rao
Senior Research Scientist

CSTEP developed a Climate Policy for India by building energy scenarios, keeping in mind the Conference on Climate Change (2015) in Paris. What we found was that the Greenhouse Gas emissions in these trajectories were much lower than the traditional approach.

CSTEP along with ISET-Nepal and Public Affairs Centre conducted a study on Climate Adaptation. The study primarily focused on capacity building in this area to help conduct research in the future. This study was supported by IDRC.

A study on Transitioning Towards a Green Economy in Karnataka, led by Prof. B.K. Chandrashekar under the Bangalore Climate Change Initiative – Karnataka (BCCI-K), examined the green growth opportunities recommended in Karnataka’s State Action Plan on Climate Change (SAPCC). This study was supported by The Global Green Growth Institute (GGGI). The mitigation aspects of climate change through long-term scenario modelling in the industry, transportation and power sectors were assessed. The final report was released by the Chief Minister of Karnataka.

Activities - At a Glance



Publications



Newspaper Articles

2014 September 25: A Global Call for Climate Justice by Dr. Sujatha Byravan and Dr. Sudhir Chella Rajan in *The Hindu*.

October 13: Demystifying Sustainable Development by Dr. Sujatha Byravan in *Sustainability Next*.

November 28: An Economic Case for Curbs on Carbon Growth by Dr. Sujatha Byravan and Dr. Anshu Bharadwaj in *The Hindu*.

2015 January 19: India can make Distinctive Contribution to Paris Climate Conference by Dr. Sujatha Byravan, Arushi Sen and Amit Kanudia was published by *IANS* and republished in more than 6 newspapers.

Reports



2014 October 31: *Climate Change Vulnerability and Adaptation in South Asia* by Dr. Sujatha Byravan and Debapriya Das.

December 6: *Transitioning Towards a Green Economy in Karnataka* by Shweta Srinivasan, Mohd. Sahil Ali, Dr. Sharath Chandra Rao and Nihit Goyal.

January 15: *A Sustainable Development Framework for India's Climate Policy* by Amit Kanudia, Dr. Anshu Bharadwaj, Arushi Sen, Mohd. Sahil Ali, Nihit Goyal, Shyam Sunder P., Dr. Sudhir Chella Rajan and Dr. Sujatha Byravan.



Presentations at August 26-27 Conference

December 19-20: Mohd. Sahil Ali and Shweta Srinivasan presented a paper at the *Fifth National Research Conference on Climate Change* in New Delhi.



Discussions at December 19-20 Conference



Journal Articles

2014 September 29: *Climate Policy and the Poor: Some Perspectives* by Dr. Sujatha Byravan in *Environmental Justice*, Volume: 7 Issue 5.

Chapter in Book



2014 November 06: *Ethical Implications of Sea-level Rise due to Climate Change* by Dr. Sujatha Byravan (published in *Ethics & International Affairs* 24 (3), Fall 2010) republished in *Science, Technology and Development in India: Encountering Values*.

Engagements



Conferences

2014 August 21-24: Nihit Goyal, Debapriya Das, Dr. Sujatha Byravan attended a conference on *Climate Change and Sustainable Development* organised by TISS Climate Conference 2014 in Mumbai.

August 26-27: CSTEP organised a conference on *Climate Change Vulnerability and Adaptation* in Bengaluru.

Workshops



2014 July 28: Nihit Goyal attended a *Roundtable Discussion on the Draft Hand Book of Climate Finance in India* organised by Vasudha Foundation in Bengaluru.

December 06: CSTEP, BCCI-K and GGGI launched the co-organised a workshop on *Launch of Karnataka's Green Growth Strategy* in Bengaluru.

2015 January 21 and February 05: Dr. Sharath Chandra Rao, Shweta Srinivasan and Mohd. Sahil Ali presented a paper at the workshop on *Climate Change, Energy-Risk and Low Carbon Strategy* organised by Environment Management & Policy Research Institute (EMPRI) in Bengaluru.

Outreach



CSTEP in Media

2014 December 6: Good for the economy, bad for the environment? Interview of Dr. Sujatha Byravan in *The Hindu*.

December 07-19: Launch of Green Growth Strategy Report by BCCI-K was published in more than 14 national and regional papers.

Projects

SERIIUS



Dr. Mridula D. Bharadwaj
Principal Research Scientist

The project analysed innovative financing schemes for large-scale Solar Plants in India. On the manufacturing side, the impact of Anti-Dumping Duty and Domestic Content Requirement for manufacturer's profit was studied. With IIT Bombay, we worked on new electrode chemistries related to Li ion and Na ion battery systems and with IISc we are developing a novel electrolyte for Na S batteries. Two reports - GIS-based Solar Resource Assessment and Site Suitability Mapping for Karnataka and Energy Storage for Renewable Energy Deployment in India: Potential, Economics and Technology Options were completed.

SCOPEBIG project had an important event where the site was officially inaugurated. Regarding visibility a brochure was developed both in English and Hindi to use as a communication material. A website has also been developed to provide as a platform to inform about the various aspects of the project.

SCOPEBIG



Thirumalai N. C.
Research Scientist

FOWIND



Meera Sudhakar
Research Scientist

FOWIND completed 2 reports: an Inception Report and a Pre-feasibility Report, which essentially provides the best locations in Tamil Nadu for off-shore wind potential. The center-piece of this report was a GIS-based study that included technical and economic parameters for this assessment, wind potential data, water depth, existing infrastructure such as ports and grids.

Using the core grants we have initiated studies which are of national importance, to engage with policy makers. It also helps to build the capacity of the researchers in areas of importance.

Pro-bono Projects



Dr. Jai Asundi
Principal Research Scientist

KERC Roadmap



Deepthi Swamy
Senior Research Engineer

The Karnataka Electricity Regulatory Commission (KERC) commissioned us to conduct a study, titled Karnataka's Roadmap for 2021-22, to assess the demand and supply of power in the state in the context of continuing shortages. The objective was to understand problems faced by the sector and discuss key challenges through stakeholder consultations. One of the key outcomes of the study is a recommendation to the government to focus on long-term power purchases in order to relieve the power shortage situation in Karnataka.

The Ministry of Mines, Government of Karnataka requested us to assess the potential of sand that can be manufactured in the state. One of the key outcomes show the potential Karnataka has in terms of resources available for manufacturing sand so as to reduce the consumption of riverbed sand. The study also provided policy recommendations for setting up large-scale sand manufacturing units.

M-Sand



Shyam Sunder P.
Senior Research Engineer



Finance



Dr. Bellarmine K.C.
 Chief Finance Officer

As a Think Tank, CSTEP is fortunate to receive long-term core grants from two donors – IDRC and OAK Foundation. These core grants, besides providing financial sustainability, also enable the organisation to undertake independent studies that are topical and impactful.

Activities



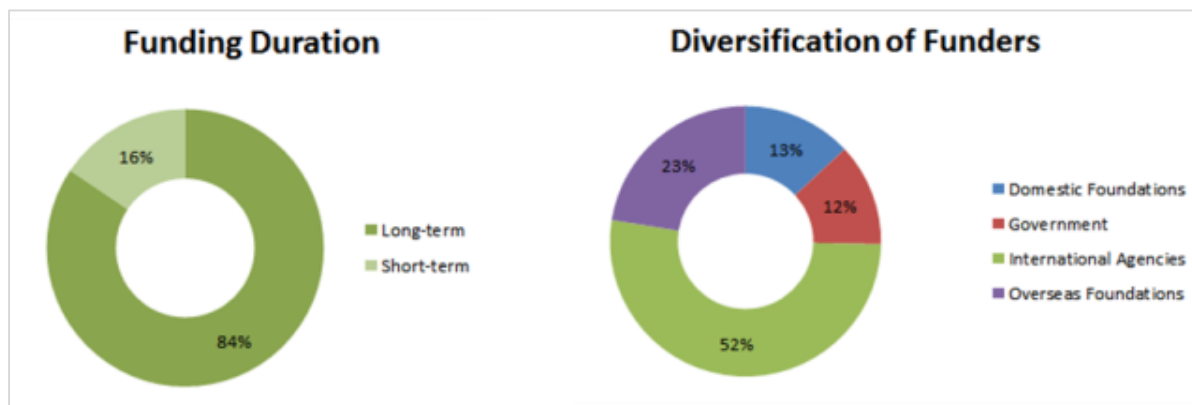
Webinars & Podcasts

2014 December 18: *Tax Made Easy* by Manjuanth Eshwar.

2015 February 19: *Think Tank-Money Matters* by Dr. Bellarmine K.C.

Workshops

2014 April 14-19: Shiva Prasad attended a *TDL Training* in Bangalore organised by BE Solutions Pvt. Ltd. (Tally).



Stakeholders, Partners and Supporters



... Thank you all



Human Resources



Amol Mishra
Manager – HR

We have introduced a new appraisal system which is transparent and also captures the key nuances of the performance of an employee. In addition, we also conducted several workshops and trainings to enhance the existing skills of the staff.



Dr. Jai Asundi
Principal Research Scientist

Since there are no formal education programmes on technology policy analysis, CSTEP conducted a short 3 month internal course for its research staff. The staff members were introduced to various concepts related to technology policy analysis and also techniques and tools for the same.

Activities

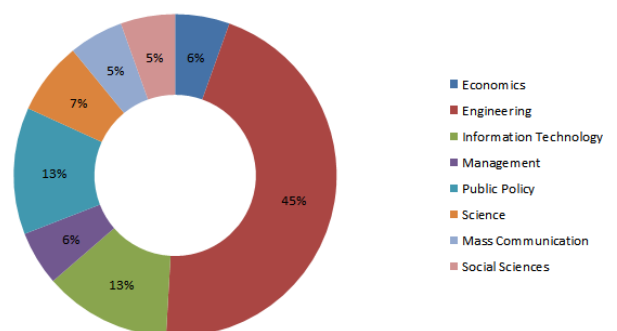


Workshops

2014 May 02: A *Sensitisation Workshop on Sexual Harassment at Workplace* was conducted for the staff. The workshop was conducted by Sarasu Thomas.

October 17 and November 14: An *Awareness Programme on Anti-sexual Harassment at Workplace* was conducted for the staff by Harsh K. Sharan.

Educational Background of Staff



Advisors

CSTEP appreciates the wealth of knowledge that the Advisors offer.



In our march towards achieving energy security, embracing clean energy ambitions, the wind resource forms a major component. Ours is a peninsular country blessed with a long coastline, shallow seas and abundant wind. Offshore wind poses less environmental concerns and offers scope of installing large capacity wind farms with higher capacity turbines. So far, our country has not embarked on a programme for harnessing this resource. It is in this backdrop the project FOWIND is conceived by a consortium of Indian organisations (CSTEP, GPCL, WISE, DNVGL) & GWEC (project lead) from Europe. The study includes recommending an enabling policy guideline to usher in offshore wind in India and will go a long way in developing a pathway for offshore wind in India.

Prof. Chandrasekaran V.S.

The Civil liability for Nuclear Damage Act (CLNDA) was passed by the Parliament in 2010 after acrimonious debate keeping the Bhopal disaster and aftermath as background. Most importantly the suppliers liability clause 17 (b), and clause 46 application of other laws in addition to CLNDA were opposed by prospective Nuclear suppliers on the basis that these do not form part of any international conventions on Nuclear Liability, resulting in a stalemate. These have been resolved during President Obama's recent visit to India and the process of commercial negotiation is understood to have commenced. Nuclear addition will be a boon to clean energy ambitions.



Prof. Rajgopal S.



The SERIUS project completed a comparative analysis of three PV thin film technologies namely CIGS, CZTS and Pervovskites, to establish the technical and economic pros and cons. The project also initiated R&D efforts in examining hybrid capacitors, in collaboration with IISc.

Dr. Ramakrishnan N.

The SCOPEBIG project has identified alternative jobs in rice mills during off-season. They include manufacture of briquettes from agriculture waste and processing rice husk ash from power plants for industrial applications. It is also envisaged that for 24x7 power generation, the use of existing Gasification technology along with reciprocating engine genset in lieu of steam turbines could be attempted. This could be at smaller capacities for providing lighting power during night times in the nearby villages.



S.V. Narasimhan



Sustainable and affordable energy is a critical need for our growing economy. It has to be clean, to avoid health impacts on our population. The issue of climate change adds more complexity, as most of the changes needed to mitigate the process which is required for this sector. The study conducted at CSTEP is basically trying to produce analysis and tools that can promote and support a logical discussion among the policy makers and various stakeholders.

Dr. Amit Kanudia

Intern Speak

CSTEP offers interns a professional platform to enhance their skills.



Sonali Anusree
M. Plan in Environmental Planning, CEPT, Ahmedabad

The work environment is very friendly and gave me an excellent opportunity to explore and expand my knowledge base. People here always encouraged me to put forward my ideas, which was a boost to my self-confidence. Being a planner, CSTEP taught me how to make my ideas and solutions more useful to the common public. I will carry forward this experience in my future endeavours.



Dhriti Jade
M. Plan in Infrastructure Planning and Housing Development, CEPT University, Ahmedabad

I am very grateful and privileged to work with a brilliant team of professionals and academicians who were always encouraging and motivating. Being a part of this organisation has given me abundant knowledge and widened my scope of study as an Urban Planner. It has been a great learning experience in a friendly work environment. It's a workplace where I would always want to cherish and see myself working in future.



Hari Sravan Pisupati
B.E, BMS College of Engineering, Bengaluru

My experience at CSTEP has been nothing short of amazing. The mentors for my project were very supportive and encouraged me in my work and I have learned so much under their accomplished guidance. The work environment was comfortable and peaceful, which makes it conducive for efficient working. I will surely cherish my experience here.

Nikhil R.
B.E, BMS College of Engineering, Bangalore

The pleasant work environment, friendly people and the able guidance of my mentors at every stage have proved invaluable during the project work. It has been a fantastic learning experience, one that will help me in our future endeavours.



Jyothi Ramamurthy
B.E in Computer Science and Engineering, VKIT, Bengaluru

My experience with CSTEP has been truly incredible, and it was a great start to my career in software development. The internship has allowed me to learn, expand my skills, and revise my future career goals.

Manish Bikumalla
B. Tech, IIT Kharagpur



I wasn't considered just an intern by my superiors but rather a colleague. I enjoyed the high expectations and standards, which challenged me in a positive and constructive manner to deliver. I might say that this experience turned to be an excellent one from both professional and personal perspectives.



Nikhil Tikoo
B.E, BMS College of Engineering, Bangalore

It was a delight to work under the guidance of some of the most incredibly brilliant minds in my field. It provided me with a huge amount of exposure. I'll carry forward this experience for a long time.

Radhika Sharma
M.Tech, TERI University, New Delhi



Recounting my experience at CSTEP, I am most amazed at the sort of work environment it offered; free, inquisitive, result-oriented and very friendly. It has truly been a great learning experience and I'll be forever indebted to those who gave me a hand here. As far as my internship goes, it provided me with an excellent chance to network with professionals and academicians in the field of renewable energy. I will carry forward this experience in my future endeavours.



Ranjan Ram
Sri Krishna Institute of Technology, Bengaluru

I would like to thank CSTEP for providing me with an invaluable learning experience. It has been a pleasure to work with the staff who were friendly and supportive, and I have gained much practical knowledge. I thank my mentor for the time, patience and guidance provided during this internship.

Sukrit Kurle
B.E, BMS College of Engineering, Bengaluru



My mentors were approachable, warm and more than helpful to help me tackle any problems faced during my internship. The work assigned was challenging as well, helping me learn about new technologies and help me improve my technical abilities. I was very happy with the opportunity to come back and do my final year project there as well, and re-live the CSTEP experience.



Communication & Policy Engagement



Dr. Annapoorna Ravichander
 Head-Communication and Policy
 Engagement

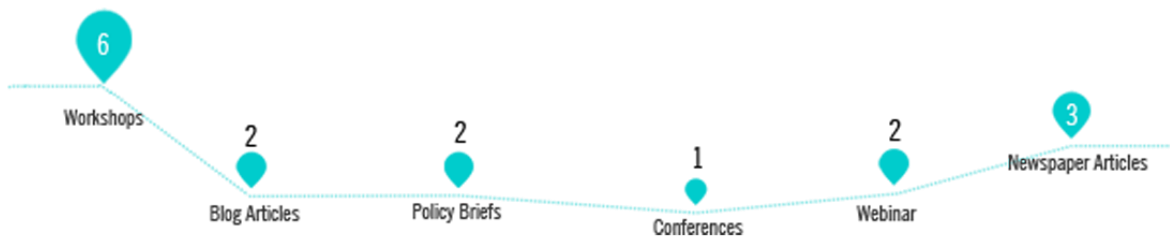
The outreach activities took a new dimension by introducing processes to improve research quality. A robust and transparent Review Process was introduced. Apart from this Aditi an online bulletin to address institutional topics was successfully brought out. CSTEP's work in the energy sector was showcased through a film by GLP productions. Both Aditi and the documentary were supported financially by IDRC.



Arushi Sen
 Media Coordinator

The engagement levels with CSTEP's various audiences grew significantly in 2014-15 through the use of social media. Regular updates of CSTEP's activities including publications, podcasts and webinars on a variety of social media platforms enabled a stronger establishment of the brand name. Facebook, Twitter, LinkedIn and Youtube were used to reach out to not just CSTEP's followers, but also appear on search results more frequently.

Activities - At a Glance



Achievements

- ❖ Started publishing with *IANS*, a news agency, which has resulted in articles being re-published multiple times.
- ❖ Several newspapers and niche journals/magazines have started approaching us for expert comments and interviews.
- ❖ Initiated regular columns with 2-3 media houses.
- ❖ The success of Aditi bulletin resulted in:
 - Initiation of publication partnership with On Think Tanks
 - Inclusion of several members from other Think Tanks on the Editorial Board.

Visibility Activities

- ❖ A short video on CSTEP was made by the CPE team to showcase the main activities of the organisation.
- ❖ Coordinated the shooting schedule of a film on CSTEP's work in the area of Renewable Energy use in India. It was commissioned by IDRC, and produced by GLP Films. The film was officially released at the Think Tank Initiative 2015 Exchange Meeting in Istanbul.
- ❖ Launched CSTEP's new website, which includes several new features for better and easy navigation.

Publications

As a research organisation and a Think Tank, CSTEP endeavours to share information across various platforms. In this effort a number of publications have been produced and disseminated.

- ❖ An online bulletin titled Aditi (Boundless Knowledge) was published. The first 3 issues were published with financial support from

IDRC. It received good encouragement and feedback. CSTEP decided to continue with the publication. The 2nd volume, with a new look, was launched at the Think Tank Initiative 2015 Exchange Meeting in Istanbul.

- ❖ The CSTEP Newsletter, which is thematic (based on the different verticals that CSTEP works on), is brought out quarterly.
- ❖ The CPE team also supports the SERIUS team to bring out a quarterly newsletter.



Snapshots of Aditi

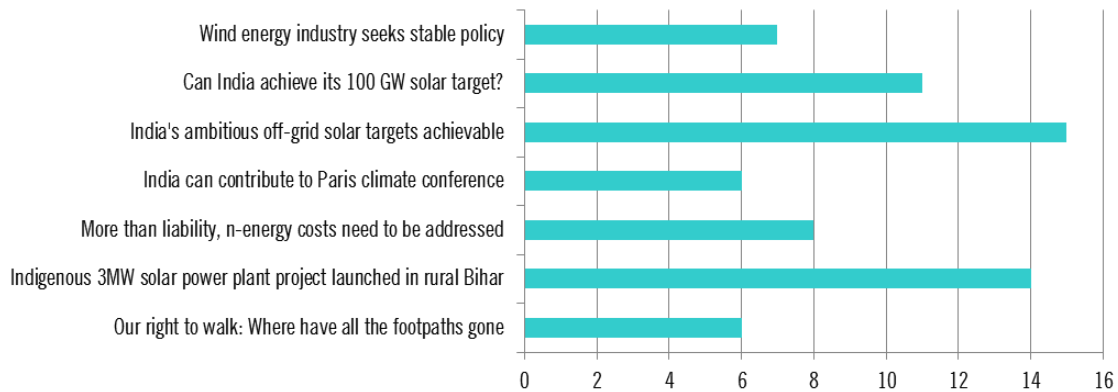
Building the Capacity of Staff

- ❖ To improve the research quality of the research staff, processes, document templates and guidelines were published.
- ❖ A Second Edition of CSTEP's Styles & Guidelines was released.
- ❖ Organising Elevator Pitch weekly to enhance the presentation skills of the staff.
- ❖ Customised training and hands-on workshops were conducted.

Engaging with Stakeholders

- ❖ Ensured that all important publications and events were shared with different stakeholders through emails and social media.
- ❖ Regular updates on the website were initiated. All activities are showcased on a daily basis to ensure maximum visibility.

Number of Re-publication of Articles



Policy Engagement and Communication Programme

As part of TTI's Policy Engagement and Communication (PEC) Programme, the CPE team spent an intensive week with Susan Koshy, CSTEP's PEC Facilitator. Some of the outcomes of this session included:

- ❖ Developing a Media Strategy for CSTEP
- ❖ Publishing a blog article, focusing on the importance of Infographics and using media as a vehicle for outreach.



Discussions with Susan Koshy

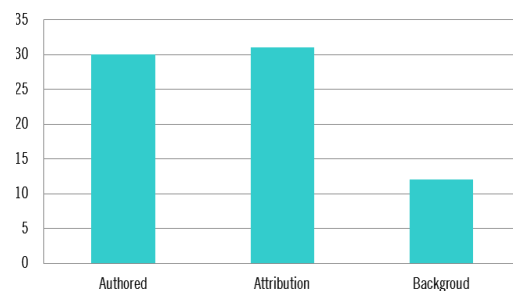
Media Activities

In order to continuously engage with different stakeholders and bring visibility to the various activities, engaging with the media was given a new dimension.

- ❖ The number of publications produced by CSTEP in the news media has increased.
- ❖ Communication materials and Press Releases are published both in English and vernacular languages.
- ❖ Press conferences were organised for some important events.
- ❖ Types of publications in the news media included:

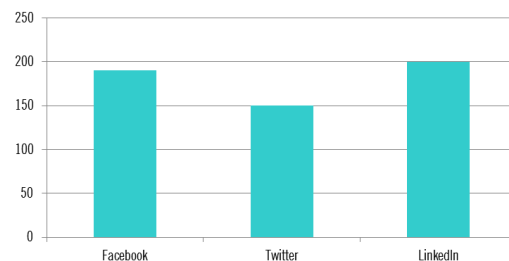
- Articles authored by CSTEP
- Featuring CSTEP with attribution
- Featuring CSTEP's work.

Number of Publications



Social Media Analytics: CSTEP's followers who like, retweet and share updates have increased.

Increase in Followers



Publications



Newspaper Articles

2014 July 13: Less activism, more research by Dr. Anshu Bhardwaj and Dr. Samar Verma in *The Hindu*.

August 02: Planning for the Commission by Dr. V.S. Arunachalam and Dr. Anshu Bharadwaj in *Business Standard*.

November 01: Creative Destruction towards a National Think Tank by Dr. Anshu Bharadwaj, Dr. Samar Verma and Dr. Jai Asundi in *EPW*.

Blog Articles

2014 September 03: Innovative Approaches to Communicating Research by Arushi Sen in *Research in Action*.

October 16: Annual Report: a Powerful Communicating Tool by Dr. Annapoorna Ravichander in *Politics and Ideas*.

2015 February 05: Online Training: a Perspective from India by Dr. Annapoorna Ravichander in *Politics and Ideas*.



Aditi Bulletin

Three issues of Phase 1 published in June and September 2014, and one issue of Phase 2 in February 2015.

Policy Briefs

2014 September 15: *Skilling India's Workforce* by S.V. Ranganath, Dr. Anshu Bharadwaj and Dr. Jai Asundi.

2015 March 10: *Affordable Housing in Urban India* by S.V. Ranganath, Dr. Anshu Bharadwaj and Dr. Jai Asundi.

Engagements



Conferences

2015 February 18-20: Dr. Anshu Bharadwaj, Dr. Jai Asundi and Dr. Annapoorna Ravichander attended the *TTI Exchange 2015 - Research to Action* organised by IDRC at Istanbul.

Workshops

2014 May 27-28: Arushi Sen attended a *Training on Media Skills* organised by Public Affairs Center (PAC) in Bengaluru.

June 9-10: Dr. Jai Asundi and Sujaya Rathi attended a workshop on *Asia in the New World: Emerging Research Themes* organised by IDRC in Kathmandu.

June 24-26: Shrimoyee Bhattacharya attended a workshop on *Policy Advocacy* organised by PAC in Bengaluru.

September 01-05: Nihit Goyal attended a workshop on *Making Impact Evaluation Matter* organised by Asian Development Bank, International Initiative for Impact Evaluation, and the Philippine Institute for Development Studies (PIDS) in Manila.

2015 March 13-15: Arushi Sen attended a *Workshop on Geographies of Desires; Understanding the Urban through Films* organised by IIHS in Bengaluru.

Outreach



Webinars & Podcasts

2015 January 08: *Catching the Media's Attention* by Arushi Sen.

March 13: *Structuring Data Management* by Bhavna Sharma.

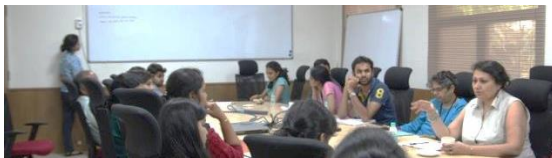
Guest Lecture Series

Experts from different domain were invited to share their knowledge and experiences with us.

2014 May 06: *From CART to CAPART: Two Technology Interventions in a Tribal Society* by Anil Date, Professor, IIT Bombay.

May 10: *U.S. Climate Change Policy and India* by Prof. Noah M. Sachs, Director of Center for Environmental Studies at Richmond Law School.

May 30: *Importance of Communication for Researchers* by Aditi Kapoor, Director – Policy Advocacy and Partnerships with Alternative Futures.



Discussions with Aditi Kapoor

July 10 and 17: *Cellular Automata Part- 1& 2* by Dr. Ramakrishnan N., Advisor, CSTEP.

September 05: *Low Carbon Inclusive Growth in India: Options Beyond Tinkering* by Dr. Sudhir Chella Rajan, Professor, IIT Madras.

September 09: *Conflicting Biotechnology Regulatory Policies: Comparative Analysis of the US and the Indian System* by Prof. Shanthu Shantharam from the Seed Science Center, Biosafety Institute for the Genetically Modified Agricultural Products (BIGMAP), Iowa State University, US.

September 10: *Tactical Nuclear Weapons: Implications of Pakistan's Nuclear Developments* by Dr. Neil Joeck, Visiting Scholar from the Institute for International Studies, University of California.

September 12: *Writing Articles for India Together* by Satrupa Sen Bhattacharya, Associate Editor, Oorvani Media.

October 27: *Challenges and Opportunities in Indian Education* by Vineet Joshi, Chairman, Central Board of Secondary Education (CBSE).

November 21: *Immediate Policy Research Needs of the Central Government on Energy Policy* by Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency, Ministry of Power.

November 28: *Talk on Game Theory* by Dr. Rahul Sami, Senior Software Engineer, Google, Bangalore.

December 03: *Imminent Sustainability Challenges in the Built Environment* by Dr. Monto Mani, Associate Professor, Centre for Sustainable Technologies, Indian Institute of Science.

2015 January 09: *E-governance in Karnataka* by Dr. Anjali K. Mohan, Research Consultant at CITAPP and Institutional Expert, IIIT Bangalore.

January 23: *Fair Climate Network's Work in Rural Settings with CDM Mechanisms* by Dr. Sudha Padmanabha, Fair Climate Network..



Presentation by Dr. Sudha Padmanabha

February 06: *Adaptation and the Everyday Politics of Climate Change: RISC for Coffee Growers in South India* by Anshu Ogra, PhD. Student at the Centre for Studies in Science Policy, Jawaharlal Nehru University, New Delhi.



Presentation by Anshu Ogra

March 12: *Think Tanks in India and Their Role in Policy Making* by Ambassador N. Parthasarthi, IFS (Retd.).

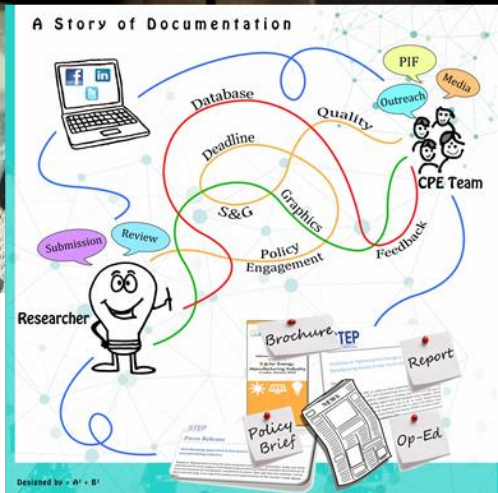
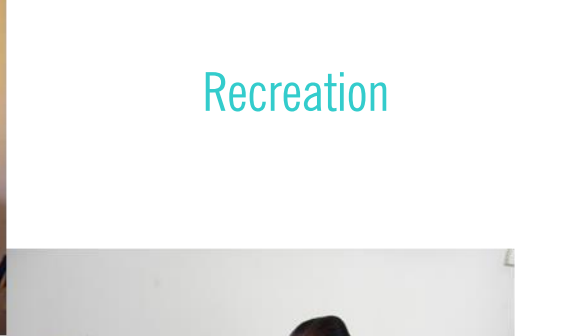
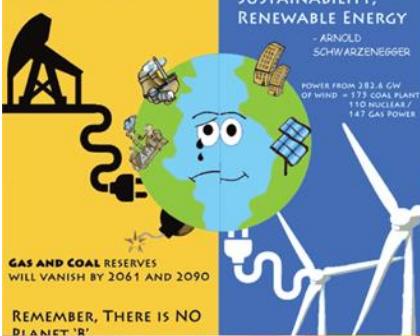
For further information on the details provided in the Annual Report, please find below helpful links:

Category of Information		Link
Publications		
	Newspaper Articles	http://cstep.in/pressroom/newspaper-articles
	Journal Articles	http://cstep.in/publications/journal-articles
	Reports	http://cstep.in/publications/reports
	Policy Briefs	http://cstep.in/publications/policy-briefs
	Blog Articles	http://cstep.in/pressroom/blog-articles
	Aditi Bulletin	http://cstep.in/publications/aditi-bulletin
	CSTEP Newsletter	http://cstep.in/publications/newsletters
Engagements		
	Conferences and Workshops	http://cstep.in/outreach/events
Outreach		
	Podcasts	http://cstep.in/outreach/podcasts
	Webinars	http://cstep.in/outreach/webinars
	CSTEP in Media	http://cstep.in/pressroom/newspaper-articles
Projects		
	SCOPEBIG	http://cstep.in/projects/scopebig
	FOWIND	http://cstep.in/projects/fowind
	SERIIUS	http://cstep.in/projects/seriius
	Pro-bono Projects	http://cstep.in/projects/pro-bono
	SanTool	http://cstep.in/projects/santool

As always, I am tremendously impressed with CSTEP. The dedication and academic fervour is outstanding. I have no doubt, this institution will soon be a top inter-national energy Think Tank.

Anil K. Jain, Advisor - Energy, Planning Commission, August 14, 2014

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