

# Coca-Cola Department of Regional Water Studies

## Progress report July 1- September 30, 2015



## Highlights

Activities during the trimester July-September 2015 have focused mainly on aggressive dissemination of the Department, Research publications, and execution of activities committed under collaborative project on 'Urban WASH' funded by USAID.

### 1. Research publications

So far, 3 research papers have been published by the faculty members of the department. The cited publications given below are those where the faculty member's affiliation is with the new department. The research has international collaboration.

1. Singh P., **Kansal A.**, Marque C.C., (2015). Energy and carbon footprints of sewage treatment methods. *Jr of Environmental Management*. Elsevier. DOI: 10.1016/j.jenvman.2015.09.017.
2. Sharma D, **Kansal A** and Pelletier G (2015). Water quality modeling for urban reach of Yamuna River, India (1999-2009), using QUAL2Kw. *Applied Water Science*. Springer. DOI 10.1007/s13201-015-0311-1.
3. Jasrotia S, **Kansal A**, Mehra A (2015). Performance of aquatic Plant species for phytoremediation of arsenic-contaminated water. *Applied Water Science*. Springer. DOI 10.1007/s13201-015-0300-4.

### 2. Dissemination of the Department

Faculty members of the Department have started engagement with various colleges in India to disseminate information about Industry-Academia partnership and programs and activities of the Department. We have delivered key note lectures in colleges in Kolkata, Jalandhar, Cochin and Goa (**Table1**). In October, activities will continue in Amritsar and Chennai. In addition to lectures, we have disseminated through posters and brochures in various colleges (**Table 2**). Other strategies for dissemination of the Department during next 6 months will include:

1. Dissemination in IITs, NITs and other reputed institutes of the country through announcement of 12 project grants of Rs 1 lakh each.
2. Dissemination in colleges within NCR for activities related to SWASH during January to March 2016.

**Table 1: Efforts to disseminate information about Coca-Cola Department of Regional Water Studies**

Place	Date		
Department of Environment Sciences, Lyallpur College, <b>Jalandhar</b>	17 <sup>th</sup> Aug 2015		
Department of Management and Information Technology, Naipunnya College, <b>Kochi</b>	14 <sup>th</sup> Sept, 2015		
Department of Zoology, Nirmala College, <b>Kochi</b>	15 <sup>th</sup> , Sept, 2015		

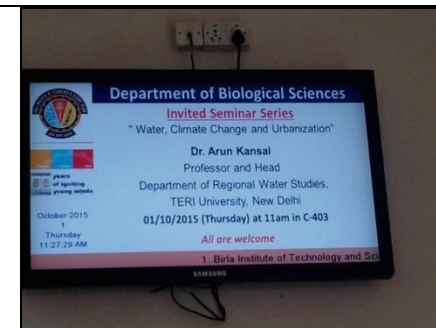
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Department of Civil Engineering, Goa      30<sup>th</sup> Sept, 2015  
College of Engineering, **Goa**



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Department of Biological Sciences,      1<sup>st</sup> Oct, 2015  
Birla Institute of Technology, Goa  
Campus, **Goa**



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Department of Earth Sciences, Goa      1<sup>st</sup> Oct, 2015  
University, **Goa**





**Table 2: List of colleges where information about Coca-Cola Department of Regional Water Studies is disseminated through posters and brochures**

S.No.	Name of College	Place	Contact person	Contact details
1.	<b>St. Xavier's College</b> 30 Mother Teresa Sarani Kolkata - 700016	Kolkata	<b>Dr Produkti Dutta</b> , Dean, Science Department	<a href="mailto:principal@sxccal.edu">principal@sxccal.edu</a> 033-22551101
2.	<b>Lady Brabourne College,</b> P-1/2, Suhrawardy Avenue Kolkata - 700017	Kolkata	<b>Dr Papiya Ganguly</b> , HOD, Chemistry <b>Prof Saswati Mookherjee</b> , Professor & Head, Geography <b>Dr Mou Roy</b> , Associate Professor & Head, Economics	<a href="mailto:pganguly.college@gmail.com">pganguly.college@gmail.com</a> <a href="mailto:saswati.mookherjee@rediffmail.com">saswati.mookherjee@rediffmail.com</a> <a href="mailto:rmou_10apr@yahoo.co.in">rmou_10apr@yahoo.co.in</a> Ph: (033) 22897720
3.	<b>Presidency University,</b> 86/1 College Street, Kolkata 700073	Kolkata	<b>Dr Soumendu Chatterjee</b> , HOD, Geography <b>Dr Gandhi Kar</b> Kumar, HOD, Chemistry <b>Dr Madhubrata Choudhury</b> , HOD, Biological Sciences	Phone: +91 33 2241 2738 <a href="mailto:gandhi.chem@presiuni.ac.in">gandhi.chem@presiuni.ac.in</a> <a href="mailto:madhubrata.dbs@presiuniv.ac.in">madhubrata.dbs@presiuniv.ac.in</a>
4.	<b>Bethune College,</b> 181, Bidhan Sarani Kolkata 700 006	Kolkata	<b>Prof Mamta Ray</b> , Principal	<a href="mailto:bethunecollege@vsnl.net">bethunecollege@vsnl.net</a> 033-2257-1712
5.	<b>Scottish Church College</b> 1 & 3 Urquhart Square Kolkata 700 006, India	Kolkata	<b>Prof Amit Abraham</b> , Principal	Phone: +91 (0) 33 2350 3862
6.	<b>Jadhavpur University</b> Salt Lake Campus Plot No.8, Salt Lake Bypass, LB Block, Sector III, Salt Lake City, Kolkata - 700098	Kolkata	<b>Prof Chandan Guha</b> , HOD, Chemical Engineering <b>Prof Samaresh Bhattacharya</b> , HOD, Chemistry <b>Dr. Ratan Gachhui</b> , HOD, Life Sciences	<a href="mailto:hod@chemical.jdvu.ac.in">hod@chemical.jdvu.ac.in</a> <a href="mailto:hod@chemistry.jdvu.ac.in">hod@chemistry.jdvu.ac.in</a> <a href="mailto:hod@lifescience.jdvu.ac.in">hod@lifescience.jdvu.ac.in</a>
7.	<b>Jadhavpur University</b> Main Campus 188, Raja S.C. Mallick Rd, Kolkata - 700032	Kolkata	<b>Prof Ramendu Bikas Sahu</b> , HOD, Civil Engineering	<a href="mailto:hod@civil.jdvu.ac.in">hod@civil.jdvu.ac.in</a>
8.	<b>Indian Institute of Engineering Science and Technology</b> , Shibpur Botanic Garden, Dist: Howrah, West Bengal, India - 711103	Kolkata	<b>Prof. Subrata Chakraborty</b> , HOD, Civil Engineering <b>Prof. Bhabani Prasad Mukhopadhyay</b> , HOD, Dept of Earth sciences <b>Souvanic Roy</b> , Director, School of Ecology	<a href="mailto:schak@civil.becs.ac.in">schak@civil.becs.ac.in</a> <a href="mailto:bpmbesus@gmail.com">bpmbesus@gmail.com</a> <a href="mailto:souvanic@arch.becs.ac.in">souvanic@arch.becs.ac.in</a>
9.	<b>Vivekananda College</b> , 269, Diamond Harbour Road, Thakurpukur Kolkata – 700063	Kolkata	<b>Dr. Rajarshi Mitra</b> , HOD, Dept of Environmental Sciences	<a href="mailto:vivekanandacollege63@gmail.com">vivekanandacollege63@gmail.com</a> Phone: 2497- 6824/6834
10.	<b>Punjab Technical University</b> , Jalandhar- Kapurthala Highway, Near Pushpa Gujral Science City, Kapurthala, Jalandhar, Punjab 144601	Jalandhar	<b>Dr. Rajneesh Sachdeva</b> , HOD, Life Sciences <b>Dr. Gaurav Bhargava</b> , HOD, Chemistry	9478098021 <a href="mailto:pturajneesh@yahoo.co.in">pturajneesh@yahoo.co.in</a> 9478098058 <a href="mailto:gaurav@ptu.ac.in">gaurav@ptu.ac.in</a>
11.	<b>National Institute of Technology Jalandhar</b>	Jalandhar	<b>Dr. S P Singh</b> , Dean Acedemics	+919814088475 <a href="mailto:spsingh@nitj.ac.in">spsingh@nitj.ac.in</a>

	N.I.T. Post Office Jalandhar - 144 011 India Fax : +91-0181-2690320, 2690932			
12.	<b>Khalsa College Entrance,</b> Mohyal Nagar, Jalandhar, Punjab 144008	Jalandhar	<b>Dr. Jaswinder Kaur</b> , HOD, Dept of Environmental Sciences	+91-181-2241465 <a href="mailto:lkjald@yahoo.com">lkjald@yahoo.com</a>
13.	<b>Lyallpur Khalsa College of Engineering Jalandhar</b> Cantt. Road, Jalandhar City, Punjab, Pin-144001	Jalandhar	<b>Dr. Munish Aggarwal</b> , HOD, Applied Sciences	Ph: 0181-2350400, 2220073 <a href="mailto:info@lkcengg.edu.in">info@lkcengg.edu.in</a>
14.	<b>D A V College, Jalandhar</b> Mahatma Hans Raj Marg, Near Post Office, Dayanand Nagar, Jalandhar, Punjab 144008	Jalandhar	<b>Dr. B B Sharma</b> , Principal	<a href="mailto:principal@davjalandhar.com">principal@davjalandhar.com</a> Phone: 91-181- 2255641,42,43
15.	<b>Doaba College</b> Vidyalay Marg Jalandhar, Laxmi Pura, Jalandhar, Punjab 144001	Jalandhar	<b>Dr Naresh Kumar Dhiman</b> , Principal	Ph: 181-2291837 (O) <a href="mailto:doabacollege@gmail.com">doabacollege@gmail.com</a>
16.	<b>Goa College of Engineering</b> "Bhausahab Bhandodkar Technical Education Complex" Farmagudi, Ponda- Goa - India Pin-403401	Goa	<b>Dr K G Guptha</b> , Civil Engineering,	Mob:9422061953, email : <a href="mailto:kgg@gec.ac.in">kgg@gec.ac.in</a>
17.	<b>Carmel College For Women</b> Margao Panjim Road, Nuvem – Goa. Fax: 91-832 2790714	Goa	<b>Ms Cheryl Alvares</b> , Department of Chemistry <b>Dr Anna Rovina Ferrao e Fernandes</b> , Department of Economics	Ph: +91-832 2790959/2790714 <a href="mailto:carmelcollege64@gmail.com">carmelcollege64@gmail.com</a>
18.	<b>Dct's Dhempe College Of Arts &amp; Science</b> P.O.Box No. 222, Miramar, Panaji, Goa - 403 001	Goa	<b>Mr. Vishwas Prabhudesai</b> , HOD, Chemistry <b>Dr. Shilpa Samant</b> , HOD, Economics	Ph: 2462376 / 2461507. <a href="mailto:dhempe@rediffmail.com">dhempe@rediffmail.com</a>
19.	<b>St. Xavier's College</b> of Arts, Science, Commerce, P.O. Box No. 32, Mapusa, Bardez Goa, 403 507 India	Goa	<b>Dr. Tushar S. Anvekar</b> , Department of Chemistry <b>Dr. Blanche R. C. S. Mascarenhas</b> , Department of Economics	Ph: 91-0832-2262356, <a href="mailto:xavierscollege@bsnl.in">xavierscollege@bsnl.in</a>
20.	<b>Padre Conceição College of Engineering,</b> Agnel Technical Education Complex, Agnelganv, Verna Goa, 403722	Goa	<b>Dr. Stephen Dias Baretto</b> , Registrar	<a href="mailto:sbarreto@pccegoa.org">sbarreto@pccegoa.org</a>
21.	<b>Goa University</b> Taleigao Plateau, Goa, India, 403206	Goa	<b>Prof A G Chachadi</b> , HOD, Dept of Earth Sciences	Ph:0823022922
22.	<b>Birla Institute of Technology and Sciences, K</b> K Birla Goa Campus, NH 17 B, Zuarinagar, Goa, India. 403 726	Goa	<b>Srikanth Mutnuri</b> , Department of Biological Sciences	Phone: 0832-2580125 <a href="mailto:srikanth@goa.bits-pilani.ac.in">srikanth@goa.bits-pilani.ac.in</a>
23.	<b>Govt Model Engineering College, Thrikkakara, Kochi,</b>	Kochi	<b>Dr. Rema Devi S</b> , HOD, Applied Science	+91-9447810386, 0484-2576342(R)

	Kerala 682021. PIN: 682021			<a href="mailto:rema@mec.ac.in">rema@mec.ac.in</a>
<b>24.</b>	<b>SCMS School Of Engineering And Technology</b> Vidya Nagar, Palissery, Karukutty, Ernakulam - 683 582 Kerala Tel : 91-484-2450330 Fax: 91-484-2450508	Kochi	<b>Meril George</b> , Civil Engineering <b>Dr.J.K John</b> , HOD, Applied Sciences	<a href="mailto:sset@scmsgroup.org">sset@scmsgroup.org</a>
<b>25.</b>	<b>Sacred Heart College</b> , Thevara, Kochi, Kerala, India. PIN - 682013 Phone: 0484 2663380, 4044412	Kochi	<b>Joseph John</b> , HOD, Chemistry <b>Cherian P E</b> , HOD, Economics	Ph: 0238 848484, 3345 <a href="mailto:principal@shcollege.ac.in">principal@shcollege.ac.in</a>
<b>26.</b>	<b>Maharajas College</b> Ernakulam, Cochin -681011 Kerala, India.	Kochi	<b>Dr. Lissamma Koshy</b> HOD, Chemisrty	Ph: 0484-2363038 <a href="mailto:principalmaharajas@yahoo.co.in">principalmaharajas@yahoo.co.in</a>
<b>27.</b>	<b>Cochin University of Science and Technology</b> , Cochin University, P O Cochin- 682 022, Kerala, India.	Kochi	<b>Dr.G Madhu</b> , Principal	Ph: 0484-2556188, <a href="mailto:principal_soe@cusat.ac.in">principal_soe@cusat.ac.in</a>
<b>28.</b>	<b>Naipunnya School of Management</b> , Near Manorama Junction, Cherthala, Alappuzha, Kerala - 688524 Kochi, Kerela	Kochi	<b>Rev. Fr. Dr. Paul Kaithottungal</b> , Executive Director & Principal	Mobile: 08157855744
<b>29.</b>	<b>Nirmala College</b> , Muvattupuzha, Ernakulam District, Kerala Pin - 686 661	Kochi	<b>Rev. Dr. Vincent Joseph</b> , Principal <b>Prof Gigi K Joseph</b> , Dept of Zoology	Mobile: 09447368222 Mobile: 09447432891
<b>30.</b>	<b>Kerela University of Fisheries and Ocean Studies</b> , Kannadi Kadu Service Rd, Panangad, Kochi, Kerala 682506	Kochi	<b>Prof B Madhusoodhana Kurup</b> , Vice Chancellor, Kerela University of Fisheries and Ocean Studies,	Ph: 0484 270 3782
<b>31.</b>	<b>Bharata Mata College</b> Thrikkakara, Kochi-682 021	Kochi	Principal	Ph: 91-484-2425121 <a href="mailto:principal@bharatamatacollege.in">principal@bharatamatacollege.in</a>
<b>32.</b>	<b>St. Teresa's College</b> , Park Avenue Road, Near Govt. Guest House, Ernakulam - 682011	Kochi	<b>Dr Sajimol Augustine M</b> , Principal	Ph: 0484-2351870, 2381312, <a href="mailto:principal@teresas.ac.in">principal@teresas.ac.in</a>
<b>33.</b>	<b>St. Albert's College</b> , Ernakulam Kerala, India 682018	Kochi	Principal	Ph:+91-484-2391245, <a href="mailto:principal@alberts.ac.in">principal@alberts.ac.in</a>

### **3. Institutional linkages**

The Department has continued linkages with other experts and organizations through joint conduct of workshops and seminar series (Annexure I and II).

### **4. Activities executed under USAID project**

Following activities were completed during reporting period.

1. Summer School on WASH- August 2015
2. ToT in Kolkata- September 2015
3. Regional Water competition- August-September 2015

Reports on above events will be submitted separately.

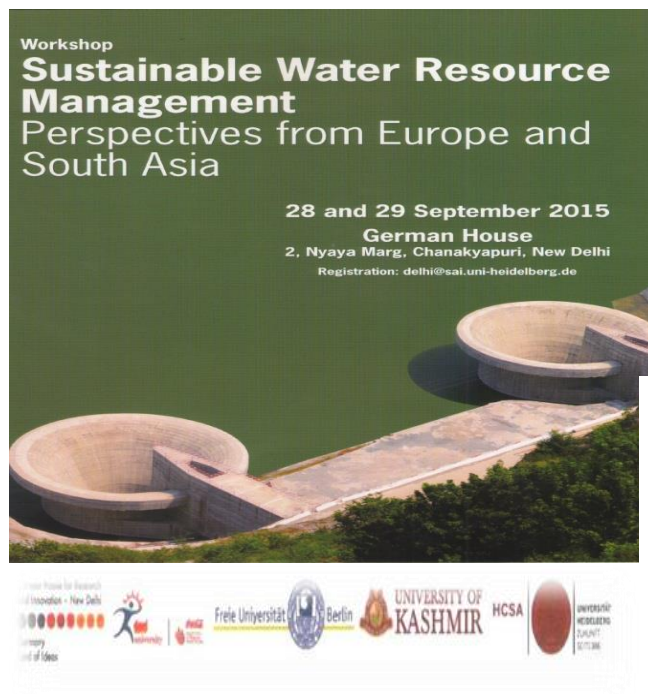
### **5. New project funding**

The Department has received some funding from ICEWARM, Australia for development of course materials on “Gender, Equity and Water Management”. The contents thus prepared will be used for conduct of on online MDP programs. New faculty member of the Department Ms Fawzia Tarannum is coordinating this project.



## Annexure I

**Workshop on “Sustainable Water Resource Management- Perspectives from Europe and South Asia” jointly organized by Heidelberg Centre, Germany, CC Department of Regional Water Studies amongst others during September 28-29, 2015**



The workshop on sustainable water management was aimed at bringing together scholars, experts and practitioners from Germany and India, from both public and private sector, covering various aspects of water resource management. The event was organized in a knowledge transfer-oriented environment so that science, policy and practice, the participants could present their work, initiatives and ideas, exchange their views and approaches, and jointly seek for innovative solutions to secure a sustainable and efficient water resource management, especially sustainable urban water management. Coca-Cola Department of Regional Water Studies was amongst the organizers of the workshop along with Heidelberg Centre for South Asia. Amongst others, Ms Fawzia Tarannum from our department presented her work on community engagement in water quality management. Ms. Pratima Singh, TERI University PhD scholar working on waste water presented a comparison of energy intensities of various sewage treatment options practiced in India and United Kingdom. Both their works were much appreciated by the august gathering. Mr. Rajesh Ayapilla, General Manager, Coca Cola presented the best practices on water initiatives that have been undertaken by Coca-Cola India. Later in the last session TERI University research scholars working in the water sector who did the rapporteuring for the workshop presented the results of the two day deliberations.

## Institutionalized Seminar Series

This seminar series is designed to address key issues in the WASH sector, so that wide range of students and working professionals get exposure to the latest techniques, innovations and interventions, in continuation, we held the following expert lectures.



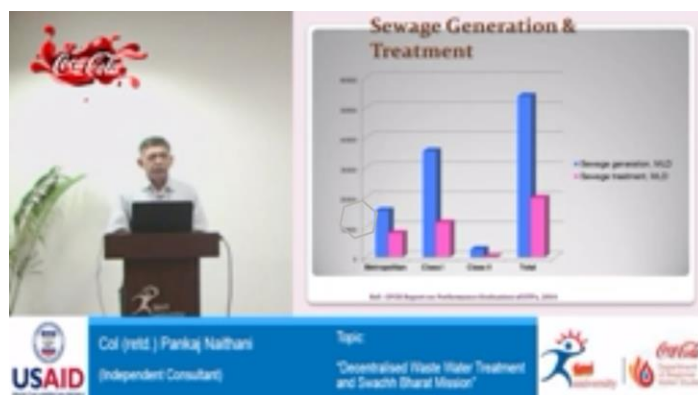
### Topic: Child Friendly Urban Settings-Focus on Informal Settlements

By Dr. Sudeshna Chatterjee, is the founder and CEO of the non-profit Action for Children's Environments (ACE)

Dr. Sudeshna in her expert lecture highlighted the importance of planning and design to improve the living environments of children while upholding the rights of all children. Trained as an architect and urban designer, she discussed how slum rehabilitation projects under the Jawaharlal Nehru National Urban Renewal Missions provided basic services to the urban poor areas (including affordable housing), these have started having impact on health and well-being of people. Under these projects the municipal authorities were committed to provide water supply, sanitation, and drainage and garbage disposal to slum areas. A particularly successful case study was the Karimadom slum development project in Trivandrum, Kerala. Students actively participated in the discussion later and discussed as to how we can incorporate design friendly solutions in urban settings to improve the psychological and physical health of children

### Topic: Decentralised Waste Water Treatment and Swachh Bharat Mission

By Col. (Retd.) Pankaj Naithani, Independent Consultant



Col. Naithani <https://www.youtube.com/watch?v=nw14TY7iswg> understanding the place that waste water treatment occupies, if water sources are to be protected. He discussed his experience with various waste water treatment methods in urban systems and how they were placed in DLF phase Gurgaon. Students actively participated in the discussion later and discussed storm water drainage systems also with him.



**Topic: GIS applications on Ground Water Exploration in Urban Settings**

By Prof. Saumitra Mukherjee, Professor, School of Environmental Sciences, J.N.U

Professor Mukherjee in his expert lecture highlighted the importance of understanding the geological structure of any area to estimate the ground water capacity. Ground water is precious, rare and needs to be used judiciously, thus recharge of ground water using rain water harvesting must be given priority. He discussed his experience with various rain water harvesting technologies in urban systems and how they were placed in the JNU campus, highlighting the fact that rain water harvesting has to be carried out with precision if ground water recharge is to be successful, this is because land use changes are so rapid in urban areas, the normal paths of recharge do not exist in most places. Geophysical tools provide great assistance in determining the quality and quantity of ground water. Students actively participated in the discussion later and changes in ground water levels in urban areas due to earthquakes were also discussed.