

FiRESiDE

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Cover

Now is the time to recall some facts we learnt on the way – water supports the intricate and interdependent web of life on earth; up to 60% of human body is water; and water cools down temperatures on this planet.

Water that we took for granted, through its nearness or absence, shared use or wanton waste, today warns us of a future, arid and bleak. Forcing us to see and not merely look at the bird and that dangling drop.

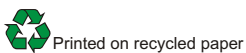
Photo by Sandip Modgi

BACK COVER
**Thermax HRSGs
for Indonesian
power plant**

Comment

“ We don't see things as they are,
we see them as we are. ”

– Anais Nin



Printed on recycled paper

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Focus on water O&M: 90 clients and counting



WHAT'S NEW ?

In the first two months of 2013, the Services arm of Water & Chemical business (CWSS) has already bagged eight new orders for operating and maintaining water and waste management utilities. Among these are contracts for O&M services for HPGCL's captive power plant at Hisar, Bilosa textile mill in Silvassa, DLF's commercial complex in Chennai and Bajaj's automobile unit in Pune.

Today, CWSS has over 90 clients across various sectors including power, oil & gas, automobile, textile and municipal infrastructure. Maruti Suzuki, Tata Power and IOC avail the services of this group, reflecting a trend to outsource the O&M of utilities. Chandigarh Municipality has also engaged CWSS' expertise for its sewage treatment facility.

Essentially, the SBU

focuses on water utilities – treatment of input water for industrial and civic installations, as well as wastewater. From demineraliser plants and wastewater recycling with the option of zero liquid discharge, the range of services also include cooling and boiler water treatment. For some customers, O&M for a wider range of utilities such as chillers and nitrogen plants are also provided. It offers annual service contracts, audit and plant performance studies.

Backed by application knowledge and technical data, CWSS offers practical solutions to clients to reduce their operating costs. The appreciation note from ACC Madukkarai Cement stating that the

Thermax team “helped us carry out many cost saving projects” reflects the essential support that the SBU provides.



*Operation and maintenance in action :
essential support to industry*

Thermax's energy rental business gains momentum



TOESL team at the Hosur facility ; and (inset) Sanjay Misri at ITC : no capital costs

Thermax Onsite Energy Solutions Ltd.(TOESL), the subsidiary focusing on energy rental business recently signed two contracts with ITC for supplying steam. Under the contracts, the company would supply steam from two boilers installed at ITC's tobacco and food products divisions, respectively at Bangalore and Ranjangaon, Maharashtra. The order comes in the wake of TOESL signing its largest contract with Madura Coats, for a minimum contracted steam off-take of 110,000 tons per anum. Two 15 tons/hour boilers are to be installed at the client's plant at Ambasamudaram, Tamil Nadu.

TOESL had been established to support industry with turnkey solutions that involve no capital costs. By installing heating systems at the client's premises to generate steam, "our promise is to spare industry the hassles of owning and maintaining utility equipment and to insulate it from the volatilities of fuel markets," says Sanjay

Misri. TOESL heating systems use green fuel (biomass) to generate energy, another plus point with companies keen to reduce their carbon footprints.

Among the utility delivery projects successfully commissioned, the latest is for a leading paint manufacturing facility in Hosur, Tamil Nadu. The utility services include steam and heat supply comprising an 8TPH boiler and a 3 million Kcal/hour thermic fluid heater.

TOESL has set up its first briquetting unit in Tumkur, Karnataka to ensure consistent supply of biomass at competitive rates. There are plans to replicate such units in other parts of India. At its installations, TOESL uses technology sourced from Lambion, Germany to burn biomass efficiently. TOESL has also established a lab in Pune to test fuel and water from customer sites. The lab analysis is used to improve the operational efficiency of the systems.



Briquetting machine

*The
Scandinavian
Energy Group
team : solutions
for district
heating*



Amager Bakke, Copenhagen

Thermax's vapour absorption heat pumps will be used for district heating in a new waste-to-energy plant, Amager Bakke in Copenhagen. Scandinavian Energy Group A/S (SEG), Thermax's distributor, will supply eight heat pumps to the plant coming up to replace a 40 year old existing facility.

One of the largest waste-to-energy projects in Europe, Amager will incinerate municipal waste to generate power and with the help of Thermax heat pumps, also deliver hot water for space heating in Copenhagen homes. The Thermax systems, packaged in two sets of four single effect steam fired heat pumps of 16980 kW each, will assist Danish city planners to deliver energy with better efficiency.

A recovery boiler converts the waste heat from the incinerated municipal waste to steam which in turn is used to generate power. The flue gas from the incinerator is scrubbed and condensed. The heat pumps absorb heat from both these sources – steam (high grade energy) and heat recovered from flue gas scrubbing (low grade energy) – to step up the temperature of the hot water to the desired 85°C for space heating at homes.

Thermax's experience with Scandinavian centralised heating projects and its technical solutions based on waste incineration data for the Amager plant helped it win this project. SEG played the important role of

New gains from global airconditioning markets : Denmark to Singapore

analysing the heat data to devise the solution. "Our presence in the Amager project will position Thermax to gain from the waste-to-energy initiatives in Europe," says Dinesh Kamath of Thermax Europe.



Gardens by the Bay, Singapore

Two Thermax chillers are deployed for air conditioning at Singapore's famed Gardens by the Bay. They help in maintaining the temperature of plants from all over the world at this huge horticultural park spanning 250 acres of reclaimed land in central Singapore.

Thermax supplied the vapour absorption chillers to Trane under its manufacturing pact with the American company. They are activated by hot water from a boiler that uses biomass as fuel. At the Singapore Gardens, the chillers are integrated with four of Trane's electrical chillers to reduce the overall energy intensity.

Cold storages for villages: a technology demonstration project

Thermax has successfully executed a technology demonstration project to provide cold storage facilities in rural areas. In a single system it successfully integrates various forms of renewable energy such as solar and biomass to create a 20 ton storage capacity that can preserve agricultural produce from villages at 0° to 5°C, and also generate incidental power of 50 kWe.

The project was jointly done with the Ministry of New and Renewable Energy (MNRE) and The Energy and Resources Institute (TERI). Installed at MNRE's Solar Energy Centre, it has been successfully running since January 2012.

The project does not depend on electricity from the grid. It brings together a biomass



At MNRE's Solar Energy Centre, Gurgaon : integrating solar and biomass

gassifier, a gas engine, an ammonia vapour absorption chiller and solar parabolic dishes. Producer gas from gassified biomass activates the gas engine. A part of the power generated by the engine is used for pumps while the rest is used for lighting. The ammonia chiller takes in heat from two sources – exhaust of the gas engine and solar energy from the parabolic dishes – to support the cold storage.

The system is providing valuable insights in terms of seasonal variations, operating parameters and integration requirements.

The concept is now ready for demonstration under different conditions.



The newly set up lab : cleaner processes

Chemical division commissions a biotechnology lab

The Chemical Division of Thermax has set up a biotech laboratory equipped with modern equipment for research. S. Ramachandran, Executive Vice President, inaugurated the lab in February 2013.

The lab set up at Bhosari, Pune is a first step in advancing the Division's new initiative in industrial biotech. The objective is to make use of the biotechnology route instead of the

traditional chemical processes to develop select products marketed or used as input in its existing products. Inherently cleaner compared to chemical processes, the biotechnology initiative is expected to reinforce Thermax's green business agenda.

To realise this objective, the division has also signed a technology agreement with the National Institute for Interdisciplinary Science & Technology (NIIST), Trivandrum.



Thermax
cannot be
called an
extravagant
company and
may I urge you
to be careful
that we don't
become a
'wasteful'
organisation.

A few weeks ago Anu and I were invited to Mumbai by an organisation called the CEO Forum which is a subset of the YPO (Young Presidents' Organization). We spoke to the CEOs from abroad on the topic, 'Business with a Purpose'. Let me build on some of the thoughts I shared there.

The cornerstone of our business, the philosophy behind building our enterprise, is beautifully captured by my grandfather, Mr. Bhatena, in his letter to new recruits, which Corporate Communications had printed in the last issue of *Fireside*.

Mr. Bhatena believed that it was a necessary requirement for every employee to “enjoy” being at Wanson (that's what we were called then). The adjectives used by him to describe the kind of people he felt would “vibe” with our company were: earnest, competent, mature, sensitive to their surroundings, pleasant and positive in their attitude towards life, with a capacity to laugh at themselves and the ability to show management muscle at senior levels.

He considered Wanson a “human enterprise” and therefore to be handled with great care. He trusted people and found it distasteful to police them. He believed in giving people responsibility and authority at a very young age – all of which is part of our ethos and what makes us unique even today. Of course, my grandfather expected that in such an environment (that Wanson offered), an individual's contribution would be the maximum and making a living would be incidental. He strongly advocated freedom of thought and expression at work; however he was also of the opinion that with freedom comes responsibility. I do believe that rigid conformity, unnecessary rules and regulations stifle imagination and human innovativeness. There have to be certain rules and boundaries in any organisation, but too many could take away the freedom that our people need to grow as individuals. Both my grandfather and father were not engineers, and yet they built a very successful engineering enterprise – how was that possible? Only because they believed and practised empowerment; trusting people and

giving them freedom to operate and run with their ideas.

Another very strong value of doing business was to integrate people from all castes, communities and regions. My grandfather left us with a deep respect for all communities. We do not believe that religion should be brought to work. We may come from different parts of India (or corners of the world) and join the company at different levels, but we strive to give equal opportunity for growth.

Mr. Bhatena was a firm believer in being a student all his life and kept the quest for knowledge and learning alive, till he died in his 80s. He was an ardent reader and kept an open mind. He shunned ostentation and it was he who set the stage for simplicity. It was “quality of life” he was seeking for himself and his employees. Thermax cannot be called an extravagant company and may I urge you to be careful that we don't become a “wasteful” organisation.

Another value important to him was being authentic, not putting on a façade or showing off. With our success, are we at times becoming arrogant and insensitive to our internal and external customers?

Another area where my grandfather and father demonstrated business with a purpose was the kind of business they decided to get into. They aligned themselves to the country's growth agenda when they focused on the businesses of energy and environment. Both felt that since it was inevitable that industrial activity and energy generation (boilers) would pollute, we should clean up the environment and therefore we moved into the environment businesses.

Such an approach seamlessly paves the way beyond business too. My favourite quote is “the business of business is to generate growth and profits or else it will die; however, if that is the sole purpose of business, then also it should die, for it no longer has a reason for existence.” Growth and profit are a must for the survival and well-being of every business enterprise. However if that is the only objective we will lose our souls.

This principle has been followed by many well respected companies in India and the world over. Today we call it the 'triple bottom line' or 'sustainable business practices' which include corporate social responsibility. Our company's practice of converting waste into energy and our recent moves to create greener and innovative solutions are steps in that direction. In a small way, we institutionalised our giving back to society by creating the Thermax Social Initiative Foundation six years ago, earmarking 1% of our profits primarily for the cause of reducing education inequity in our country. Last year our board approved donating 3% of profits to the Foundation. I am happy that as a responsible business we had realised our social responsibility before it becomes mandatory. However, at the Foundation we are not content with only financial contribution. I would urge each employee (if possible, with family) to get involved in some worthy cause and as we know, India has no dearth of social challenges where one can reach out.

In the past, most companies were keen to please only the shareholders and financial analysts, often at the cost of other stakeholders. This definitely is not sustainable. An organisation like Thermax is concerned about all our stakeholders – since they are all important to achieve our purpose.

Since we recently undertook a *Customer Satisfaction Survey*, I would like to talk about our customers (one of our key stakeholders). Our customer satisfaction rating has remained more or less constant, which you can interpret any way you want. If you want to give yourself a pat, you can argue that in spite of fierce competition from within and abroad, it is good that we have maintained our rating. If you want to be in a 'constantly raising the bar mode' you would be concerned that with our customers having greater choice and with their expectations rising, maintaining the same rating is not very healthy.

The survey highlights areas in which we are doing well and which are appreciated by our customers. How can we make sure we strive to maintain and even push the boundaries to improve on our strengths?

More importantly, we should be very concerned with the areas where our customers are not too happy with us and ensure that we diligently work and enhance these scores. By merely wishing and wanting, the scores will not increase. It will require studying the survey in great depth and deciding to work with a sense of focus and care in each area. What we need to improve could be tangible areas like quality of our services and delivery or it could be our attitude (which is perhaps more difficult to change, but required).

Going back to my father, he used to be extremely pained to get a customer complaint and I would hear him say "a part of me dies". Amongst the old timers who knew him, there is a great fondness for him. Can we translate that affection by being far more sensitive to what the customer is asking?

At the recent Open Forum I was rather surprised that many of our employees had not been through the customer survey results. Please request and, if necessary, demand that the results be shared with each of you. Take up each issue, form groups (cross-functional, if need be) and eliminate each irritant that the customer has experienced in dealing with Thermax.

We have a unique culture with sentient processes like the Open Forum for all our employees. Let us all work towards retaining the good aspects of our company and eliminating what we are not happy with. You cannot expect only the management to bring about desired results. This is your company and it is an on-going journey, where each of you have to be an active participant. I am calling this an on-going journey because there is no fixed destination and wherever we reach, there will always be room for further improvement.

I invite each of you to continue to make Thermax a business with a purpose.

With best wishes,

Meher Pudumjee

EXPRESSIONS



We need to improve tangible areas like quality of our services and delivery or it could be our attitude, which is more difficult to change, but required.

Jan Enemark, Managing Director of Danstoker, the Thermax company in Europe talks about the excitement of leading a growing organisation, and the pleasures of football. In conversation with A.M. Roshan.

UP CLOSE

“With Thermax support, not worry

Jan Enemark comes from a working class family. His father worked with his hands and his mother took care of their home in the Danish city of Kolding where he grew up. Jan himself began his work life on the shop floor after dropping out from middle school.

It is a December evening and we are at Jan's hotel room in Pune. It has been a busy day for him, meeting colleagues from the Heating Division and spending time at the Chinchwad factory. But he graciously makes coffee for me and talks to me about his life and career.

Jan's first job was at Danfoss, a company that manufactured valves, temperature and pressure control equipment. After two years there, he realised he had to resume his interrupted education. A fast track course at high school and a four year Diploma course in Mechanical Engineering followed. Incidentally, his training focused on thermo dynamics, the discipline from which Thermax spun its core businesses.

Between 1990 and 1995, he worked with a company dealing in harvesting machines. From a supervisory role in production, he moved to sales where he spent the last three years.

Jan began work in Danstoker in 1995 and for the next six years, he headed Sales in the company's oil and gas division. “There I understood the importance of working closely with engineering and proposal teams to make the sales pitch effective.” Though exciting, this phase left him unhappy: the work involved hectic travel and he hardly got time to spend with his three sons who were 6, 4 and 1 year old.

That was when he quit Danstoker in 2001 to find a job that would help him spend more time with his family. For the next five years he worked for Herning City administration's environmental agency handling waste-to-energy projects which also included hazardous waste. “It gave me the opportunity to understand how energy

projects are managed.”

On the family front too it was a satisfying time for Jan. His eyes light up when he says, “I could watch my young son Victor grow up. I really came to know him.”

Victor is now 12 years old and he plays for the junior team of FCM, owned by Dempo Goa, another bond that connects his father to India. Our discussion turns to football and Jan is animated when he speaks with passion about his and his sons' feel for the game. Though his wife Birgitte also comes from a football loving family, she had not been prepared for the football craze of Jan and the boys. He chuckles as he repeats her statement, “I now have 4 football idiots at home.”

Football is Jan's way of unwinding. He watches the Champion's League and Danish-European matches on television. He lists driving children to their play sessions and watching them play among his favourite past times.

It was in 2006 that he got a call from Danstoker's promoter requesting his services. He rejoined the sales (Oil & Gas) team, and in 2007 became the Sales Chief for entire Danstoker. He was also told of the succession plan whereby he would take over as MD. True to script, in 2009 the serving MD stepped aside and Jan succeeded him. Interestingly, his predecessor continues in Danstoker as part of the sales team. Isn't this unusual, won't it be a kind of demotion for the person concerned? Jan assures me that Denmark has similar examples of senior professionals continuing within the organisation, with reduced levels of responsibility.

It has been over two years since Danstoker came into the Thermax fold. How has the journey fared so far? Jan is happy about the strategic decision of his company to be part of Thermax. “This is the best marriage we could dream of,” he says. In today's Europe where many companies are constrained by

Danstoker need about financing growth.”

issues related to bank finance, if Danstoker has to grow, Jan feels that with Thermax's support “there need not be any worries about financing growth.” Moreover, he finds a match in the values and culture of both companies. There is an emphasis on “delivering what's promised.”

Jan is happy about the results of outsourcing Danstoker's design work to India, which is cost effective and of good quality. There are already five people working in Pune for Danstoker, and he envisages the number to go up. “It is a big help.”

We move into the delicate zone of perceptions about countries and people. Jan is comfortable with the informality and sense of humour that he encounters in India. “These are qualities that people in Denmark can also relate to.”

However, Jan says that the inequality of Indian life “makes me uncomfortable.” His unease is understandable as in terms of Gini Coefficient, the measure of inequality, Denmark is among the topmost countries in the world that have bridged the gap between the rich and the poor.

Jan is excited about the prospects for Danstoker's growth. In a Europe troubled by recession, Danstoker has done exceptionally well. Its products now reach across to the Middle East and the company is ready to explore Chile and South America. Armed with ASME certification, Danstoker is already prospecting in the North American market. It is involved in a waste-to-energy project for Babcock & Wilcox in Florida.

We talk of Carbon 20, the European initiative to reduce carbon footprint by 20% by 2010. Jan agrees that it is a tough goal, but “it is a necessity and it is a great opportunity for clean energy companies like ours.”

I ask about Omnical, the German subsidiary that is under his care and has been through

a rough patch. He says it will take time to turnaround, but is confident of Omnical's “growth in future – especially in exports where they have been weak.”

Sanjay Reddy from Heating had told me that Jan is a keen cyclist. He bicycles at least once a week to work which is 10 kms away. He tells me that he would like to make that at least two times a week. “It is my New Year resolution.”

As I wrap up my session, Jan changes to his track suit and running shoes. “I jog out on the roads, here. It feels good, but the dogs seem to like following me,” he says with a laugh.

I wish him and our colleagues at Danstoker the best for all their plans. Jan says reassuringly, “The situation has never been so good for us. This winter, we are fully booked and 2013-14 will be a very good year for us.”

“Carbon 20 is a great opportunity for clean energy companies like ours.”



ROUND UP

Municipal solid waste management:

A probable way forward

A grate indigenously developed by Thermax B&H to burn low grade biomass could help municipalities dispose of their solid waste more efficiently and harness energy from it – either by processing saleable refuse derived fuel (RDF) or by generating power.

The air cooled pusher grate, a joint initiative with Jaiprakash Associates, incinerates Chandigarh municipality's solid waste (MSW) which, like typical Indian household waste, is of low calorific value (around 1500 kcal/kg). The Jaiprakash plant, where the grate is installed, daily processes 250 tons of waste to generate 55 tons of RDF which is sold to other companies for their fuel requirements.

The plant has been in operation for over a year. Earlier, before the Thermax pusher grate was installed, nearly 20 tons of the RDF from the 55 tons generated used to be wasted for drying the wet municipal waste. Additionally, the plant also used to dump 30 tons of rejects because of its high moisture content. Today, the plant uses the RDF rejects as fuel, resulting in better waste

Fuel from waste at Chandigarh : indigenous development



disposal. 20 tons of good quality RDF (of 3500 kcal/kg calorific value) which used to be diverted for use in the plant is now sold. And ash generated from the process, discarded earlier, is now used as filling material in road construction.

Thermax has fine tuned its technology from earlier projects done at Godrej Agrovet Ltd. and at Shalivahana Power Ltd., both in Andhra Pradesh. It has plans for bigger projects focusing on power generation from MSW.

The impressive performance of the plant has drawn the attention of several developers. The B&H team of Jalindar Gaikwad, Kishor Vaidya, Umesh Kulkarni, Manoj Maheshwari, Prakash Karve and Satish Kumra made this project a success.



Mahendran and Balaji ; (centre and right) at the meet : sterling customer support

Achiever award for prompt service

At its Vendor Meet 2013, Sterlite Industries felicitated Thermax's C&H Services for prompt customer support.

In 2002, Thermax had supplied an 18 TPH twin furnace boiler for Sterlite's Phosphoric acid plant at Tuticorin. When one furnace stopped operating, the team delivered spare parts in record time and deputed an expert to oversee site repair and welding of the furnace.

At the felicitation, R. Mahendran and S. Balaji accepted the award for Best Achiever from Sterlite's President-HR.

Expanding procurement horizons to China

The challenges and opportunities of sourcing from Chinese vendors generated an intense discussion within Thermax. Thermax's business heads and material chiefs exchanged notes with Accenture and Lanco Infratech at the China Purchasing Meeting held in Pune, January this year.

Organised by the Corporate Sourcing team, Thermax teams shared their experience since 2004 of procuring raw materials and equipment from China. From their eight years in China, Ashish Vaishnav and Shrikant Wale had unique sourcing

anecdotes to share. Accenture covered the macroeconomic situation and came up with insights about sourcing from China, and Lanco Infratech shared its experience of EPC procurement of complete power plants from the country.

M.S. Unnikrishnan, MD & CEO, while summing up the conference, advised the participants to "focus on items in low-medium risk category which would give medium-high benefits". He also recommended sourcing forays into other low cost countries including Eastern Europe.

Thermax introduces Aquaerotherm for the tea industry



The product development team : efficient and clean heating

Thermax's Heating division recently unveiled Aquaerotherm for efficient and clean heating in tea drying processes. With better system efficiency, this indirect heating equipment has many advantages over current systems available to the tea industry.

In the new system, via an intermediate medium (water), flue gases heat air to a steady temperature and dry the tea leaves. Aquaerotherm is more compact as it eliminates the external radiator and circulation pump, and it improves thermal

efficiency thanks to lower power requirements, recirculation of hot air and by avoiding loss of flash steam. It also has control and safety interlocks for smooth and safe operation.

Considering its higher efficiency and lower operating cost compared to earlier heating systems, orders have come in from tea estates in Jalpaiguri, Siliguri, and Gudalur. The Heating Division is confident of Aquaerotherm's potential for other process industries.

*An HRSG supplied by Thermax:
sustained quality*



Thermax a key supplier for Shell

Thermax has signed a five-year Enterprise Framework Agreement (EFA) with Royal Dutch Shell to supply products and services for Shell's upstream and downstream oil and gas operations worldwide. Under the global agreement, Thermax qualifies to be a key supplier of heat recovery steam generators and water tube boilers.

The EFAs formed with a limited number of vendors are part of Shell's strategy to reduce costs by eliminating supply chain

inefficiencies and through competitive procurement; achieve sustained quality and security of supply. This pre qualification enables Thermax to bid for Shell projects in the future and enhances prospects of doing business with the energy major. Says Rajan Nair, Executive Vice President, "Thermax is confident of strategically partnering with Shell for substantial business gains."

Co-generation boilers for the sugar sector

Vinay Nayar, Paresh Raheja and Sanjay Gaikwad from B&H presented a technical paper at the 42nd Annual Convention of The South Indian Sugarcane & Sugar Technologists' Association in Bangalore. Their presentation was on utilising high pressure and high efficiency bagasse based boilers for cogeneration in sugar plants. The seminar helped generate business enquiries from the sugar and distillery sectors.



*The Thermax team on
Co-generation : efficiency
in sugar plants*

Performance bonus for Power O&M team



Thermax team at MCL : client appreciation

Madras Cements Ltd. has rewarded the Power plant management Services (O&M) team of Thermax with a performance bonus. The team has been maintaining two 18 MW based captive power plants of MCL for the past three years at Jayanthipuram. MCL appreciated the good work in making the plant available more than the contracted 95% of time during the financial year 2011-12.

The team prevented interruptions in operation and ensured zero downtime by planning and carrying out major maintenance work during shutdown periods.

Through preventive maintenance they minimised erosion and breakdown, offered prompt information on plant condition, conducted multi-skill training programmes, and ensured zero accidents through good safety and housekeeping practices.



A mehendi session : something for everyone

Entertaining and educating the children

RDACC, Thermax's cultural centre, wore a festive look at the Annual New Year party for employees' children. The big and small tots played many games, shot at balloons and bounced about on Jumping Jack. The fair, organised by the Industrial Relations team, also had mehendi and tattoo artists, angry bird and Mickey Mouse mascots, and a late Santa distributing sweets. Hot snacks, an animation movie and

prizes ensured that everyone, young and old, had something to do.

The Industrial Relations team had also organised classes on Vedic Math. Students between the ages of 10 and 20 learnt techniques to solve complex mathematical questions in the least possible time and in fewer steps, sometimes, a single line.

Climbers not quite over the hill



Trek over three hills : young again

In January, 30 enthusiastic trekkers from C&H climbed the Dhakcha Bahiri hill located 16 kms from Lonavala in the Karjat range. Organised by Sunil Mahajan and led by B.R. Bhegade and N.K. Bhalerao, the climb attracted enthusiasts, a majority of whom were in the 40 to 50 age bracket.

Leaving Chinchwad at 7 AM, the trekkers

parked their mini-bus where the motorable road ended at Kondeshwar. They began the climb and after crossing three hills and the stunning Kalakari pinnacle, they reached the Bahiri cave at noon. On the way down, the ravenous team relished lunch and departing from Kondeshwar at 5 PM, promised to repeat the trek in the near future.

Dialogues for Growth with Channel Associates

Thermax organised two interactions with their channel associates in Delhi and Chennai. Titled *Samvād-Dialogue for Growth*, this interaction encouraged ideas for business development and constructive feedback from all participants.



S. Ramachandran addressing the audience : encouraging ideas



TCA representatives discussed opportunities and improvement areas for sustainable growth.

At both interactions, organised by the Channel Management group, EVP S. Ramachandran emphasised “the need to promote standard products and to promptly address leads generated through the toll free Customer Interaction Centre.” He also felicitated TCA’s best employees who had contributed to the growth of their respective organisation.

Towards more engaged and trained customers

Thermax's Channel Management Group (CMG) reached out to customers across the country to share details of the water and chemical business products and to conduct training sessions.

Partnering with Thermochem Corporation, the Channel Associate from Bangalore, CMG organised seven *In-Touch* programmes with customers in four cities in Karnataka and three in Kerala. 152 participants from pharma, food and beverages, energy and power, plywood and other industries were introduced to new green chemical products and trained on water treatment chemicals.

A similar training programme on the Liquid Process filters was organised through S.S. Chemicals, Channel Associate at Hyderabad. Sandeep Patil introduced the



At a Bangalore training : practical solutions

subject, explained the basics of filtration and handled an interactive question and answer session with 45 participants from Asian paints, Carlsberg, Biocon, Parle Agro and Zenotech.

In Chennai, a training on the operation and maintenance of Reverse Osmosis and Demeralisation was conducted by V.M. Desai, Ravindra Shelke and V. Sureshkumar. Participants from companies like Saint-Gobain, Asian Paints, Hospira Healthcare, Chemfab Alkalies and Perfetti Van Melle appreciated the practical solutions they were offered.



At the Thermax stall in Abu Dhabi : prospecting for growth

Focusing on West Asia's oil and gas industry

The Thermax stall at the Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC) presented the company's varied portfolio for the oil & gas sector. The B&H team manning the stall updated the delegates about Thermax's innovative offerings.

At ADIPEC, there were about 1600 exhibitors from 90 countries showcasing their projects. Says Shyam Bhutada, SPU Head – Oil & Gas (B&H), "As the Middle East markets are critical for our growth, our presence at the largest event for the region's oil and gas industry is important."



En route to Yercaud : bonding experience

Cricket at 1500 metres above sea level

In January, the Southern SSBU service team enjoyed a two day trip to Yercaud, the picturesque hill station 20 kms from Salem. The trip turned out to be a bonding experience as most of them were less than a year old at Thermax.

The game of cricket they played at 1500 mts above sea level was made extra challenging by the fact that the boundary lines were the valleys below.

Running for the cause of education



Seven years of running : enthusiastic participation

Thermax participated in the Standard Chartered Mumbai Marathon in January for the seventh successive year. The company raised Rs. 4.42 lakh in the Corporate Challenge category in support of the Akanksha Foundation.

In February, 36 employees ran the Runathon of Hope organised by the Rotary club of Nigdi, Pune.

Bonding over treks and cricket



The Enviro team took off for Bhilar, near Panchgani for a two day management development programme. Up among the Sahyadri hills, the team got active with rappelling, a nature trail, camping and management games.

An inter-departmental cricket tournament called the Enviro Premier League 2 saw 14 teams vie for top spot. Team 'FBP Challengers' took away top honours, with 'EnviroKeLutere' coming a close second.

TCA showrooms inaugurated in Ahmedabad and Siliguri



At an inaugural event : widening the customer base

Two new Thermax Channel showrooms were recently inaugurated in Gujarat and West Bengal. The showrooms, managed by the Channel Associates (TCAs) Praj Sales and Services, and Greenery Solution, have video conferencing facilities and sale outlets. They join five others in Vijaywada, Faridabad, Bangalore, Chandigarh and Kanpur.

At the inaugural events held in Ahmedabad and Siliguri, Parashar Dave of Praj and Pratik Pal of Greenery were felicitated by Sudhir Vahal, Head- Global Channel Management. Interacting with other TCAs from the regions, customers and consultants, Sudhir hoped that these showrooms could benefit both Thermax and TCAs to reach out to a wider customer base.



Learning techniques for self defence

Women at Thermax were reminded that preparedness is a precondition for personal safety when they attended a session on self defence techniques at EERC.

Held on International Women's Day (8th March), the training provided practical tips on being alert, agile and confident to tackle

any potentially dangerous situation. Many participants volunteered for demonstrations conducted by Deepak Shirke, a Taekwondo national player and instructor. Deepak stressed the importance of physical fitness, a healthy diet, mental strength and formal self defence training.

Surabhi reaches for the stars in US space programme

Surabhi was selected for a weeklong Honeywell Leadership Challenge Academy program at the U.S. Space and Rocket Centre in Huntsville, Alabama. She was among 10 students selected from India for the programme which included practical workshops on science, technology and engineering. Surabhi, an 11th standard student of Maharashtra Vidyalaya and Jr. College, Pune, is the daughter of Vaishali and Sudhir Lale from Corporate Secretariat.



Surabhi

Hrishikesh selected to join NDA



Hrishikesh

Hrishikesh was selected as a cadet for the 129th batch of the National Defence Academy, Pune. He ranked 422 out of the 3.5 lakh hopefuls. Hrishikesh, who was pursuing engineering, had cleared the UPSC exam to qualify for the NDA. He is the son of Vrushali and Sujeet Ghogare from Enviro.

Freya wears many hats

Tenth standard Freya stood 1st in Africa and 7th in the world in the Gujarati language examination conducted by Edexcel. Freya, a student of Premier Academy, Nairobi, Kenya is also learning Chinese and Spanish. Daughter of Firuzi and Nawzar Satarawala from Heating, Freya plays hockey and basketball, and also the piano.



Freya

Tejaswini is state level tennis champ



Tejaswini

Thirteen year old Tejaswini won the District Level Interschool Tennis Tournament in lawn tennis at Pune for the second successive year. A 7th standard student at Jnana Prabodhini Navanagar Vidyalaya, Pune, she had also won the Rising Star Open Tournament organised by Champions Academy. Tejaswini is the daughter of Urmila and Nandkumar Kate from Heating.

Akshay wins IT award



Akshay

Akshay Hulikavi won the 100 Chief Information Officer (CIO) award from *IT NEXT* a media organisation, at a ceremony in Hyderabad. This 360 degree platform recognises and honours 100 senior IT professionals with the talent to become future CIOs. The winners are selected through a comprehensive six month process that evaluates technical, management and leadership skills. Akshay who joined Thermax in 1995 works with Business Technology Group. He enjoys reading and photography.

Omkar, a state level high jump athlete

Omkar is one of the under-14 Maharashtra State level high jump athletes selected from Pune. He has been training for the past three years and is ranked 2nd in his school, Jnana Prabodhini Navnagar Vidyalaya, Nigdi. Omkar is the son of Urmila and Popat Bhosale from B&H.



Omkar

Manish completes MBA in Finance



Manish

Manish Swami from Savli plant completed his MBA in Finance from Indira Gandhi National Open University, New Delhi. Manish, who has been with Thermax since 2008, works with the Legal and Taxation department. He likes to unwind with cricket and music.

Akshay wins first prize for electrical project

Akshay Patel from Power won first prize in 'Paroksha 2011', a national level project competition at G.H. Rasoni College of Engineering and Management, Pune. His project 'Prepaid Energy Meter' was a part of his final year curriculum. Akshay joined Thermax in July 2011 as a Diploma Engineer Trainee. He enjoys reading and sports in his free time.



Akshay



Tom Alter with the children : unconventional initiatives

Can you imagine government school students discussing editorial content and layout as they make steady progress on their school magazine? Or talk storyboards and movie making with Tom Alter? Again, imagine them being mentored by experts volunteering from the National Chemical Laboratory? As heartening as it is true, K.C. Thackeray Vidya Niketan (KCT) goes beyond teaching their students the course syllabus; it introduces them to real life skills to make a difference to themselves and their world.

While the Thermax Social Initiative Foundation handles administration, Akanksha Foundation prepares the syllabus, recruits and trains teachers. The Pune Municipal Corporation (PMC) owns the premises of this English medium school and ensures that various government school schemes are made available to the students. KCT will enter its seventh year in the academic session 2013-14 and will have close to 480 students.

The school helps its children from disadvantaged backgrounds to gain confidence and to grow with healthy values. Several students stay back for the After School Art Programme to study photography, flute and Kathak. At their Friday Clubs run by teachers, they practise debate, learn to cook and get to know more about automobiles. Enthused by their Science Club, four students from class VII and VIII are gearing up to compete in the next international science fair.

Last year, for the first time, the school made its mark in interschool sports. Coached by sports teacher Appasaheb Gaikwad, KCT's children bagged medals in volleyball, cycling, martial arts and triple jump. The chess teams also returned with laurels. Four of the school's children battled wits in an


The decisive hour : a school poised to excel

interschool debate. They were the only participants from a government school. Young Mukul Nale received an 'honourable mention' for his spirited defense of the topic, 'Civil society Vs despotic government – has the sleeping dragon been aroused?'

In 2009, Education Quality Foundation of India, Delhi, awarded K.C. Thackeray School, the Whole School Award for Excellence – recognising the good work and dedication of KCT's staff and students. They were one of six schools selected from 10,000 others across the country; and one of only the three government schools.

As with unconventional initiatives like these, the school has braved many storms – dealing with the anxieties inherent in public-private partnerships, or worse, retaining its senior students. Kalyani Sohoni, the school's social worker remembers the difficult times when she visited parents at home and dissuaded students dangerously close to dropping out. "All we can do is counsel them about what's right and wrong, and give options." she says, "It's our job to help, not to give up easily and accept failure in a situations beyond our control."

The first batch of KCT appeared for their Std. X Board exams in March – the first English medium school among PMC schools to do this. At this decisive hour, ask Principal Shalini Sachdev if she feels her students are ready to step out of the safe haven of the school into the world and she says with pride, "I hope so. Our team has worked through holidays, collaborated with other schools to teach ourselves; reached out to our students' families... we have done whatever we could." Ask the students how they feel and, with rare self assurance, they speak of pursuing higher studies, being entrepreneurs, and choosing careers based on their strengths and family resources. And they tell you, with a gravity way beyond their years that they wouldn't forget the virtues of integrity, enthusiasm and kindness they have learnt at school.



The many faces of global environmental movement

Ramachandra Guha, historian, environmental thinker and prose stylist, delineates the main strands of environmental thought and action, across the world – how from a dreamy regard for nature it has been transformed into an agenda for change, seeking less destructive technologies and lifestyles; and a charter of rights, demanding social justice. Excerpts from Guha's 1999 book, Environmentalism: A Global Survey.

Photo by Sanjay Gosavi, Thermax

Going Green

The environmental movement is a child of the sixties that has stayed its course. Where other manifestations of that decade of protest – pacifism, the counter-culture and the civil rights struggle – have either lost out or lost their way, the green wave shows no sign of abating. The environmental movement has refused to go away and, some would say, refused to grow up, retaining the vigor and intensity but also the impatience and intolerance of an ever-youthful social movement. Alone among the movements of the sixties, it has gained steadily in power, prestige and, what is perhaps most important, public appeal.

Environmentalism is by now a genuinely international movement, occurring with lesser or greater intensity in a variety of countries around the globe. It has come to constitute a field-of-force in which different

individuals and organizations, far removed in space, collaborate and sometimes compete in forging a movement that often transcends national boundaries.

As a program of political reform, articulating concrete policies for states and societies to adopt, environmentalism needs to be distinguished from a more narrow aesthetic or scientific appreciation of the natural world. ... Environmentalism goes beyond the literary appreciation of landscapes and the scientific analysis of species. I argue that environmentalism must be viewed as a social program, a charter of action which seeks to protect cherished habitats, protest against their degradation, and prescribe less destructive technologies and lifestyles.

When did the environmental movement begin? Most accounts of the American movement date its beginnings to Rachel Carson's book on pesticide pollution,

SIGNPOSTS

Silent Springs published in 1962 and variously described as the 'bible' and 'founding event' of modern environmentalism.

The history of environmentalism in most countries has followed a broadly similar pattern; an early period of pioneering and prophecy, culminating in recent decades in a widespread social movement. We might thus speak of a first wave of environmentalism, the initial response to the onset of industrialization, and a second wave when a

largely intellectual response was given shape and force by a groundswell of public support.

The first wave of environmentalism proceeded step-by-step with the Industrial Revolution, itself the most far-reaching process of social change in human history. The industrialization of the world dramatically altered the natural world through new methods of resource extraction, production, and transportation. The scale and intensity at

which nature was used (and abused) increased manifold. Simultaneously, advances in medical technology led to a steady increase in human populations. More humans producing more and consuming more led axiomatically to greater pollution and habitat degradation. The pace of environmental destruction greatly accelerated. Nature became a source of cheap raw material as well as a sink for dumping the unwanted residues of economic growth. Open-cast mining and the ever-growing appetite of industry decimated forests and wild lands. New and dangerous chemicals were excreted into rivers and the atmosphere.

Environmentalism must be viewed as a social program, a charter of action which seeks to protect cherished habitats, protest against their degradation, and prescribe less destructive technologies and lifestyles.

The industrialization of Europe led also to major changes in the rural economy. The factories and cities needed materials to process and consume, these demands leading to a transformation of agriculture through the adoption of more capital-intensive, market-oriented methods of production. Pastures and hedgerows and small farms with mixed crops gave way to a more monotonous landscape, of large, continuous holdings dominated by crop monocultures. Further afield, European economic growth also impacted the natural environments of Asia, Africa and North America.

Industrialization had an organic connection with imperial expansion, as white colonists took possession of large parts of the globe, re-orienting local economies towards the demands of the metropolis. British ships were built of Burma teak, their sailors wearing clothes of cotton grown in India, drinking Kenyan coffee sweetened with sugar planted in the Caribbean. Decimating the forests of north-eastern United States, southern Africa and the Western Ghats of India—to name only three such regions—the British were, through the eighteenth and nineteenth centuries, unquestionably the world leaders in deforestation. Emulating them in lesser or greater degree were the Dutch, the Portuguese, the French, the Belgians and the Germans, European powers who were to all become prime agents of ecological destruction in their colonies.

Environmental problems were certainly not unknown in the past, but possibly for the first time in human history there was now the perception of an environmental crisis. This was the perception seized upon by the first wave of environmentalism, which asked whether the great increases in wealth and prosperity brought about by modern industrialization were in fact sustainable. Notably, while the industrial city was the prime generator of ecological degradation, much of the burden of this degradation was felt in the country and the colony. In the



vanguard of the first wave of environmentalism were residents of the countryside, such as William Wordsworth, as well as unwilling subjects of colonialism, such as Mohandas Karamchand 'Mahatma' Gandhi.

As a dynamic social response to the Industrial Revolution, environmentalism bears comparison with three other movements of the modern world – democracy, socialism, and feminism. Defined in opposition to absolutism, democracy calls for a greater voice of ordinary citizens in decisions that affect their lives. Defined in opposition to both feudalism and capitalism, socialism calls for a more equitable distribution of wealth and productive resources. Defined in opposition to patriarchy, feminism calls for the granting of greater political and economic rights to women. Meanwhile the environmental movement has expanded human understandings of 'rights' and 'justice', calling for greater attention to the rights of nature as well as for sustainable lifestyles. Its agenda has sometimes been complementary to the agendas of other movements – at other times, in competition with them.



The ecology of affluence

Silent Spring was the work of Rachel Carson, a biologist who had worked for years with the U.S. Fish and Wildlife Service. The influence of her book might be judged by numbers: by the fact that *Silent Spring* sold half-a-million copies in hard cover, the fact that it stayed thirty-one weeks on the New York Times bestseller list, the fact that it was quickly published, in English or in translation, in some two dozen countries...*Silent Spring* is a truly remarkable work, a contribution to science that is worth reading – and re-reading – for its literary qualities alone.

For Rachel Carson the 'central problem of our age' was the 'contamination of man's

total environment with substances of incredible potential for harm. These were the new chemicals patented during and after the war, such as dichloro-diphenyl-trichloroethane (DDT), an insecticide that had found wide favor among farmers and scientists. DDT was only the most prominent of an array of pesticides synthesized by chemists for use on the farm and in the factory. Between 1947 and 1960, the output of pesticides in the U.S. jumped from 1.24 to 6.37 million pounds; Used for a worthy purpose – to increase food production by eliminating pests – these manipulated chemicals had become, in Carson's colorful language, 'elixirs of death, a 'battery of poisons of truly extraordinary powers'. As she explained, chemicals applied to plants and trees slowly leached into the soil and water, thereupon entering the food chain. Passing from one organism to another, from insects and birds to fish and animals, they went on to enter the bodies of humans in repeated small doses. These chemicals, modeled in the laboratory with little regard to their impact on the natural world, thus constituted an ever-present if insidiously invisible danger to diverse forms of life.

The early chapters of *Silent Spring* describe these new chemicals, their applications and impact on soil, water, and forests. The book then moves on to a defense of nature against these modern and, in the author's view, unwarranted intrusions. A chapter on wildlife is followed by one on birds, centered on deaths of robins in parts of New England, poisoned by eating worms contaminated by insecticides sprayed on the elm tree – a perfect example of how the poisons worked their way up the food chain. It was this threat to a loved and familiar bird that the book's title evoked: 'the sudden silencing of the song of birds, the obliteration of the color and beauty and interest they lent to our world' such that 'spring now comes unheralded' by their return, with 'the early

mornings strangely silent where once they were filled with the beauty of bird song.'

Carson provides accounts of eagle kills and salmon deaths, before arriving finally at the threat to human life through chemical ingestion, most dramatically illustrated by the increasing incidence of cancer.

Silent Spring is a marvel of popular and partisan science, rich in well chosen examples and carefully detailed case studies drawn from specialized scientific works, here

Silent Spring helped environmentalists move to an appreciation that 'in nature nothing exists alone' ...that nature was, in 'sum, an intricate web of life whose interwoven strands lead from microbes to man.'

arranged and presented to the public in beautifully crafted prose. Beneath and beyond the facts lay a deeper philosophical argument, to the effect that nature was to be respected as a 'complex, precise and highly integrated system of relationships between living things which cannot safely be ignored any more than the law of gravity can be defied with impunity by a man perched on the edge of a cliff.

Environmentalists had for some time been concerned with the protection of endangered species or beautiful habitats; it was *Silent Spring* which helped them move further, to an appreciation that 'in nature nothing exists alone' that 'there are intimate and essential relations between plants and the earth, between plants and other plants, between plants and animals': that nature was, in 'sum, an intricate web of life whose interwoven strands lead from microbes to man.' The interconnectedness of all life called for a modest, gentle and cautious attitude toward nature, rather than the arrogant, aggressive and intrepid route taken by synthetic chemistry and its products. Otherwise the web of life could

very easily become the web of death.

The consequences of the book were far-reaching. In the wake of *Silent Spring* towns 'reconsidered their foolish herbicidal assaults' on avenue shrubs and trees; citizens and officials became more alert to potential fish kills in rivers; senators and congressmen were energized to make pesticide production a subject for political debate and legislative enactment; a Pesticide Control Act of 1972 and a Toxic Substances Control Act of 1974 gave legal teeth to attempts to more closely control and monitor chemicals. Not since the appearance of John Maynard Keynes' *General Theory of Employment, Interest and Money* – which was published in England in 1937 – did a single book have such a dramatic and simultaneous impact on public opinion, scientific research, and state policy.



The environmental movement: From ideas to activism

The University of Copenhagen, March 1969: a seminar on natural history is in progress, with some of Denmark's foremost scientists in attendance. A group of students enter the conference hall, lock the doors, and cut off the ventilation. Shouting slogans against pollution, they burn garbage they have brought with them, spray water from a polluted lake all over the participants, and hold aloft a duck doused with oil. 'Come and save it', they scream at the scientists: 'You talk about pollution, why don't you do anything about it.' An hour of this hectoring and eerie symbolism elapses before the youths open the doors. But their protest is not finished: they drag the naturalists off to the next room. In this room was being held the founding meeting of NOAH, a body that would take Danish conservation beyond genteel discussion toward systematic social action.



This dramatic episode captures the distance between environmentalism's first wave and its second. Muir and Leopold, Marsh and Ruskin, were all 'activists' in their own way, yet their activism consisted for the most part in speaking and writing, in using the power of their words and the precision of their analyses to persuade others to join or follow them. Other conservationists worked closely with politicians and public officials, seeking to influence state policies toward forest protection or water management. Contemporary environmentalism has by no means eschewed these strategies of propaganda, and advocacy, yet its potential has been greatly increased by its resort to more militant forms of action.

In this respect, of course, environmentalism has resembled other social movements of the late '60s and '70s: the feminist movement, the peace movement, the civil rights movement, and the environmental movement.

Environmentalism shared some tactics of protest with these other movements, but it was also to forge innovative methods of its own. Marches and processions in defense of the wild or in opposition to pollution were influenced by the civil rights struggle. The 'teach-in,' used to such good effect by the anti-war movement, was the model for a nation-wide effort, Earth Day, held on April 22, 1970, and described as 'the largest organized demonstration in human history.' In thousands of cities and towns spread across America, an estimated 20 million participants affirmed their commitment to a clean environment by planting trees, clearing up garbage, or silently protesting with placards outside polluting industries. Before and after Earth Day have occurred hundreds of more localized protests against more focused targets. Faced with a noxious chemical plant or an illegal toxic waste dump, with the coming in of chainsaws into their favorite forest or a dam being built on their

favorite river, environmentalists took to the streets and increasingly to the courts to obtain redress. To 'Plant more Trees' and 'Save the Grizzly' was added a more threatening slogan: 'Sue the Bastard'.

The Swedish sociologist Andrew Jamison has written of the new social movements that they were primarily the work of 'young people impatient with the political methods of their elders;' they represented, in effect, a 'revolt of the young.' With feminism and the peace movement, environmentalism was also driven by the energy and idealism of men and women in their twenties and thirties...

The expansion of the mass base of the environmental movement is more plausibly related to corresponding changes in economy and society. For as the affluent society grew more affluent still, its members yearned for more arresting goods to consume. By the mid-sixties, cars, refrigerators and washing-machines had become commonplace, but holidays in the wild were not. The shift to a five-day week meant that consumers had both money and the means to travel. They now wished to escape, if only for a weekend or two, from their everyday milieu of factory or farm, city or suburb. Nature, whether in the form of forests to walk through, beaches to swim from, or mountains to climb and recline upon, provided the perfect – since temporary – antidote to industrial civilization.

Between 1957 and 1972 the proportion of Germans who took vacation trips of a week or more rose from 36 per cent to 53 per cent. Nor was Germany exceptional; in Sweden, the increase in free time meant that 'more Swedes wanted to hunt, fish, bird-watch and collect berries, mushrooms and wild flowers in the forest.' In a nation of only 8.5 million people, as many as 600,000 came to own country cottages. In their working life these Swedes were

caught up in 'the landscape of industrial production,' ruled by 'rationality, calculation, profit and effectiveness,' escaping on holidays and weekends to 'another landscape of recreation, contemplation, and romance. All over the industrial world, as the historian Samuel Hays points out, 'natural environments which formerly had been looked upon as "useless" waiting only to be developed, now came to be thought of as "useful" for filling human wants and needs. They played no less a significant role in the

There does exist a vibrant and growing environmental constituency in societies such as Brazil, India and Thailand, countries richly varied among themselves but united by the poverty of the masses of their peoples.

advanced consumer society than did such material goods as hi fi sets or indoor gardens.' This last quote seems to point to an uncomfortable gap between the environmental debate and the environmental movement. Scientists and ideologues were concerned with resource shortages and the disappearance of species. They were critical of the direction of economic growth and its impact on local, national or global ecosystems. Set against these prophets of doom was the growing popular interest in the wild and the beautiful, which not merely accepted the parameters of the affluent society but was wont to see nature itself as merely one more good to be 'consumed.' The uncertain commitment of most nature lovers to a more comprehensive environmental ideology is illustrated by the paradox that they were willing to drive thousands of miles, using up scarce oil and polluting the atmosphere, to visit national parks and sanctuaries; thus using anti-ecological means to marvel in the beauty of forests, swamps or mountains protected as specimens of a 'pristine' and 'untouched' nature.

By equating environmentalism exclusively

with affluence, scholars seem to posit an evolutionary sequence – of poor societies becoming prosperous before they can find green movements in their midst... there does in fact exist a vibrant and growing environmental constituency in societies such as Brazil, India and Thailand, countries far-flung and richly varied among themselves but united nonetheless by the poverty of the masses of their peoples.

The Environmentalism of the Poor

Let me offer five examples of poor peoples' environmentalism, taken from five recognizably less-than-wealthy societies of the globe.

1. The Penan are a tiny community of hunters and farmers who live in the forests of the Malaysian state of Sarawak. They number less than 7000 individuals. In the late '80s, they became major players in a major controversy. For their forest home had been steadily encroached upon by commercial loggers, whose felling activities had fouled their rivers, exposed their soils and destroyed plants and animals which they harvested for food. Beyond this material loss was a deeper loss of meaning, for the Penan have a strong cultural bond with their river and forest landscape. Helped by Bruno Manser, a Swiss artist who then lived with them, the tribe organized blockades and demonstrations to force the chainsaws and their operators back to where they came from. The Penan struggle was taken up and publicized by the respected Penang-based group, Sahabat Alam Malaysia, and by transnational forums such as Greenpeace, and the Rainforest Action Network.

2. The Sardar Sarovar dam, being built on the Narmada river in central India, shall stand as a showpiece of Indian economic development. Four hundred and sixty feet high when completed, the dam will provide much-needed irrigation and electricity, but it shall also submerge historic old temples, rich



deciduous forests, and at least 250 villages. These potential 'oustees' have come together under the banner of the Narmada Bachao Andolan (Save the Narmada Movement), which is led by Medha Patkar. In their bid to stop dam construction, Patkar and her colleagues have fasted outside provincial legislatures, camped outside the Indian prime minister's house in New Delhi, and walked through the Narmada valley to raise awareness of the predicament of the to-be-displaced villagers.

3. Pressed to earn foreign exchange, the state forest department of Thailand initiated, in the late '70s, the conversion of acres and acres of natural forests into monocultural plantations of eucalyptus. The department hopes to thus plant up 60,000 square kilometres by the year 2020, to provide eucalyptus chips for paper mills, mostly owned by Japanese companies. While bureaucrats in Bangkok contemplated a rising intake of yen, peasants in the forests began opposition to the plantations. They believed that their rice fields would be affected by the proximity of the water-guzzling and soil-depleting Australian tree; they also mourned the loss of the mixed forests from which they harvested fodder, fuel, fruit and medicines. Peasant protesters are mobilized by Buddhist priests, who lead delegations to public officials and also conduct 'ordination' ceremonies to prevent natural forests being turned into artificial ones.

4. On November 10, 1995, the military dictatorship of Nigeria hung nine dissenters, the most prominent of whom was the poet and playwright Ken Saro-Wiwa. Their crime had been to draw attention to the impact on their Ogoni tribe of oil drilling by the Anglo-Dutch conglomerate, Royal Shell. The federal government benefited from oil exploration in the form of rising revenues, but the Ogoni lost a great deal. They remained without schools, or hospitals;

thirty-five years of drilling had instead led to death and devastation: 'a blighted countryside, an atmosphere full of carbon monoxide and hydrocarbon; a land in which wildlife is unknown; a land of polluted streams and creeks, a land which is, in every sense of the term, an ecological disaster.' The Movement for the Survival of the Ogoni People, founded by Saro-Wiwa in 1991, had intensified the public opposition to Shell and its military backers. The generals in Lagos responded with threats, intimidation, arrest, and finally by judicially murdering Saro-Wiwa and his colleagues.

5. My final illustration is one of environmental reconstruction rather than protest. This is Kenya's Green Belt Movement, founded by Wangari Maathai, an anatomist schooled at the University of Kansas who became her country's first woman professor. In 1977 Maathai threw up her university position to motivate other, less-privileged women to protect and improve their environment. Starting with a mere seven saplings planted on June 5, 1977 (World Environment Day), the movement had by 1992 distributed 7,000,000 saplings, planted and cared for by groups of village women spread over twenty-two districts of Kenya. The Green Belt Movement, writes the journalist Fred Pearce, has "arguably done more to stall the expansion of deserts and the destruction of soils in Africa than its big brother international body down the road, the United Nations Environmental Program [also headquartered in Nairobi] with its grand but largely unsuccessful anti-desertification programs."

– Excerpted from
The Ramchandra
Guha Omnibus



Food and fitness: the eternal match

It would be an understatement to say that my husband Ben and I love food. We are certified gluttons. The after-effects of gluttony may not have altered our

physical appearances. However, we were gradually getting conscious of our sedentary lifestyle and our genealogies that speak of heart attacks. A family resolution was inevitable - "All family members above the age of twenty five should hit the gym." That left only the baby out. The idea was as pleasant to my ears as blaring horns to someone whose car just broke down in the middle of a busy road. Since family decrees are extended marriage vows, I settled for a prima facie compliance.

For the sake of convenience, privacy and space, we decided to part ways and join gyms of our choice. Ben opted for an expensive unisex gym and I chose an obscure 'ladies only' gym so that my staying slim and trim can continue to remain an enigma to others. But it also could mean that while Ben cycles away in an Eskimo friendly environment, I might be sweating away under a ceiling fan.

We made room for our brand new gym accessories – Ben with his branded apparel and me, some cute local stuff. It is the weak that need the Guccis and the Armanis to make themselves acceptable.

Love all!

Ben skipped off to the gym at 6:00 AM while I was still snoring away.

Perspiration brings desperation to devour food. Ben came back from the gym at about 8:00 AM and feasted on wholesome breakfast, an apple and protein shake.

I decided to wriggle out an hour after work and pick up the baby from her crèche at 7:00 PM. What would I eat at 7:00 PM, for I am 'lacto-intolerant' and 'fruit-phobic'. I will have to wait a neat 2-3 hours for

supper, which being the only family meal, we prefer to sup together.

Love- Fifteen!

My gym is on the first floor of a road-side building, with a Hot Chips store occupying the ground floor. The store's stove frying the goodies is strategically located in the courtyard to magnetise passers-by. Their onslaught does not stop there. The gym's sole treadmill faces the window just above the stove and the smell of frying potatoes, tapioca or even bitter gourd is capable of seducing even the staunchest of fitness fanatics.

After my intense work out session, I was as drained as a dry fig and hungry enough to chomp down an elephant. A plate of healthy oats porridge could be waiting for me at home. How appetising!

On descending the flight of stairs, I thought that I should take some fresh potato wafers for the baby. So I got 250 gm of harmless potato wafers packed from the store and walked towards the crèche. As I cuddled the warm packet in my arms, I realised that the crispies might turn soggy due to the condensing vapours. So with all good intentions, I employed my teeth and cut open a slit in the packet. How was I to know that the aroma would manage to escape right into my innocent nostrils and trigger a chain reaction? My rumbling stomach sent an SOS signal to my arm which tossed two wafers into my mouth. I don't exactly remember what happened during the next seven minutes; 85% of the contents had already disappeared.

However, about 10 meters away from the crèche, genuine wisdom dawned. Why feed the baby such junk stuff; instead, on reaching home I should give her a wholesome egg and a glass of milk. But since I hate to waste food, I almost sacrificially emptied the contents of the pack into my mouth and destroyed all evidence of its existence.

Love - Thirty!

When it comes to rituals, I am ritualistic! Potato wafers became an indispensable part of my fitness regime.

Ben and I exchanged notes for almost a month; however, I never disclosed this secret indulgence to him. Every morning he would flex his imaginary muscles and pluck at my delicate arms for the contrast.

One day my gym instructor caught me in the act of munching away the chips. The very next day there was a print out on the notice board enumerating the calories on many of my favourite quick bites. Potato wafers stood there close to the very top of the list.

Love- Forty!

I relinquished the idea of indulging in that harmful product.

The same evening, stiff necked I walked past Hot Chips without returning Ankush's smile. Oh, he is boy who normally packs the stuff for me!

I was on the right track again. So there I was, about 80 meters from the crèche, and I inhaled the smell of bhel from a recently inaugurated tapri. The aroma of the pulses cooking in simmer was mouth watering. I mentally scanned the possible ingredients. Puri- made of green gram- nutritious; imli water- good for digestion; delicately chopped onions - eliminates free radicals; coriander-chlorophyll; tomatoes- purifies blood; murmuraa is nothing but rice flakes. Now, this is wholesome food.

I quickly joined the group waiting for paani puri. Suddenly feeling timid and tender, on being asked my preference, I slowly muttered, "All the ingredients, but in moderation." Briskly he started making the concoction and dexterously poured it into the puries. Then he customized it. One to each candidate and in total there would be six repeats. After having distributed the first round he checked with us if we required any more modifications. Some of us gave our feedback, I requested him to decrease the chili content, for my eyes were already watery.

After knocking in six paani puries, I asked him to make a plate of puries with mashed

potatoes and yogurt as the filling. Hmm...that was yum. I paid the vender 25 Rupees, thanked him profusely and happily skipped off towards the crèche....!

Game point!

I was not hungry even by 10:00 PM and excused myself from dinner. Informed Ben that my stomach was feeling bloated.

"You might have eaten some rotten roadside stuff." I didn't respond. How can spouses be so mistrustful?

By 11:00 PM I was tossing and turning on the bed. I tried to sleep with a pillow under my belly. Then I tucked my knees under my chest. Then arranged two pillows between my legs. No yogaasans helped. Ben claimed to know better, "Gas... that's all." I popped in a Gelusil tablet.

Loose motion can be as tiring as it can be relieving. After a few bouts Ben forced some ORS down my throat. Thanks honey, for inducing the vomiting spell. I felt no better. I was in agonizing pain.

By 3 in the morning Ben started cross questioning me as to what all I had eaten during the course of the day. Even before my admission, he proclaimed that it was food poisoning.

Finally I confessed to having eaten paani puri.

Match point!

"Girl, when will you learn? The water that they use could be from any gutter... If you are lucky it would be the remains of rain-water harvesting..." A listing of waterborne disease that I must be already infected with followed.

It is indeed better to sit on the pot than lie next to a struck tape recorder. At 5:30 AM after umpteen visits to the loo, Ben asked me to pop in an Omipresol tablet.

It helped.

Next morning I wake up. Wiser. And make a solemn pledge: "Come what may, I'll never ever go to a gym again."

That was how Ben won the Fitness Open 2010.



– Ashwathy Zachariah
Power Division



Fauji lessons for Corporates

We often look back to our alma mater for inspiration. The National Defence Academy (NDA) in Pune which I joined at 17 years taught me to maintain an energetic and enthusiastic attitude. This positivity is not restricted to academics and field training but also to life in general.

Let me share some experiences which may bolster the confidence of friends in the corporate world and help them get more out of life.

Cross life's obstacles with an eye on the goal

At the NDA, we had to pass mandatory physical tests before being eligible for the next term. While I was good at many, one test involved running with battle gear and jumping across a 9 foot long ditch. I managed it easily even when others hesitated. But one day I slipped and twisted my ankle. When I recovered I was mentally afraid of hurting myself again. What if I misjudged the leap and broke my leg?

Contemplating how to overcome my fear that evening, I happened to see our PT teacher, Subedar Bhim Singh cycling home. When I sheepishly told him how I felt he gave me some sound advice. The trick, he explained, was not to focus on the initial edge but to keep my eyes on the far edge as I sped towards it. I understood, ran, leaped forward and wow! I landed much ahead of 10 feet. Ecstatic, I repeated the obstacle ditch with rifle and backpack again and again. That leap of faith over hardship and belief in my own ability always took me safely to the other side.

Carry your team along

In full battle gear and with a rifle in hand, we used to run 25-30 km endurance competitions over wild terrain and hills. The 'team' had to win, which meant we did not allow any stragglers. We carried our weak runners with us, and at times, even their rifles. That was a true team building test.

Use resources sparingly and wisely

"Hold the trigger, steady your breath, watch the target and unleash a single shot of

death." These words of Subedar Ram Pratap Singh, our firing instructor, taught us to complete a task using resources economically. One Shot One Kill. We may never get a second chance if the enemy's bullet hits its target before ours does. The same philosophy holds true in executing projects resourcefully and on time.

Never lose hope

In my fourth term, I waged a life threatening battle against a tumor. Did this mean the end of my career? Thanks to the efforts of the physiotherapist during post operative rehabilitation and my mates who helped me work back my fitness, I cleared all physical endurance tests. I've been ship shape in all my 20 years in the Army while serving in all parts of the country. And continue to remain so.

Guided by a nobler purpose

'Your duty is action, with no eye on the fruits it will bring' (Karmanye vadhikaraste ma phaleshu kada china). This ideal has guided the noblest of men and women. In every sphere of life, the self has to be subordinated to a higher end, a nobler purpose.

It has been over three years since I left the Armed forces for the corporate world. I enjoy sharing information, learning new technology and interacting with true professionals. Yes, I need to get used to the relaxed response culture versus the quick response action that was expected from an army man. But I can see the benefits an ex-Service man can bring to the corporate arena: lead by example, know your job, value team spirit, be loyal to the organisation, lay importance on physical and moral courage and take decisions. Like Jack Welch wrote on corporates employing junior military officers, "JMOs will move anywhere. Your toughest location might be better than the best outpost they've endured."

I sometimes miss the camaraderie of my NDA course mates with whom I lived and fought, at border and insurgency areas. But I am glad what I learned there will always be with me.



– Lt. Colonel Vikram Bakshi
Heating Division

An occasional page for expressions in visual arts from Thermax employees. Three amateur photographers present their special moments.

Monsoon time at the Kas Pathar plateau in Satara. Atul Hundare from the Power division clicked this photograph with his Nikon D3100 .



At the Modhera Sun Temple, Gujarat. Sanjay Gosavi from B&H, Savli captured this image (Camera: Nikon D3000)

Autumn leaves as seen through the camera (Nikon D-5100) of Jaideep Singh Mann, Power Division



GLIMPSES

Don't tell me
the plot.
I have been waiting
60 years...



In 1955 I had tickets to see Agatha Christie's *The Mousetrap* at the New Ambassadors, but I was forced to pull out after losing my right leg at the knee in an unfortunate happenstance involving a tram in Jermeyn Street.

Two weeks ago my great-grandchildren, on the occasion of my 86th birthday, presented me with tickets to finally attend a performance at St. Martin's tomorrow evening.

For almost 60 years I have avoided finding out "whodunnit" in Mrs. Christie's masterpiece. Now I come on here to read a review of a film and the beans are spilled as though a choleric two-year old had vomited them over my shirt front.

Thank you, sir!

Source: A reader's letter in the Guardian after a discussion on a film reveals the plot detail of a famous play

From

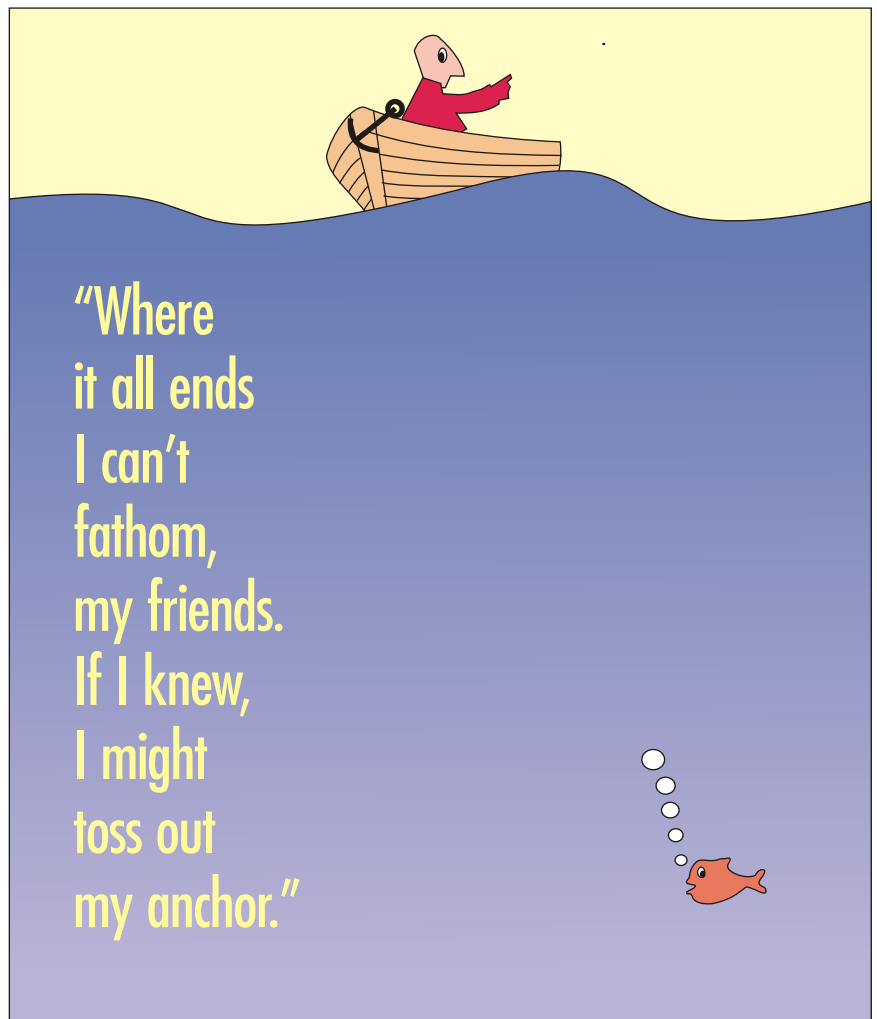


SINGLE BLACK FEMALE seeks male companionship, ethnicity unimportant. I'm a very good looking girl who loves to play. I love long walks in the woods, riding in your pickup truck, hunting, camping and fishing trips, cosy winter nights lying by the fire. Candlelight dinners will have me eating out of your hand. Rub me the right way and watch me respond. I'll be at the front door when you get home from work, wearing only what nature gave me. Kiss me and I'm yours. Call (404) ***-6420 and ask for Daisy.

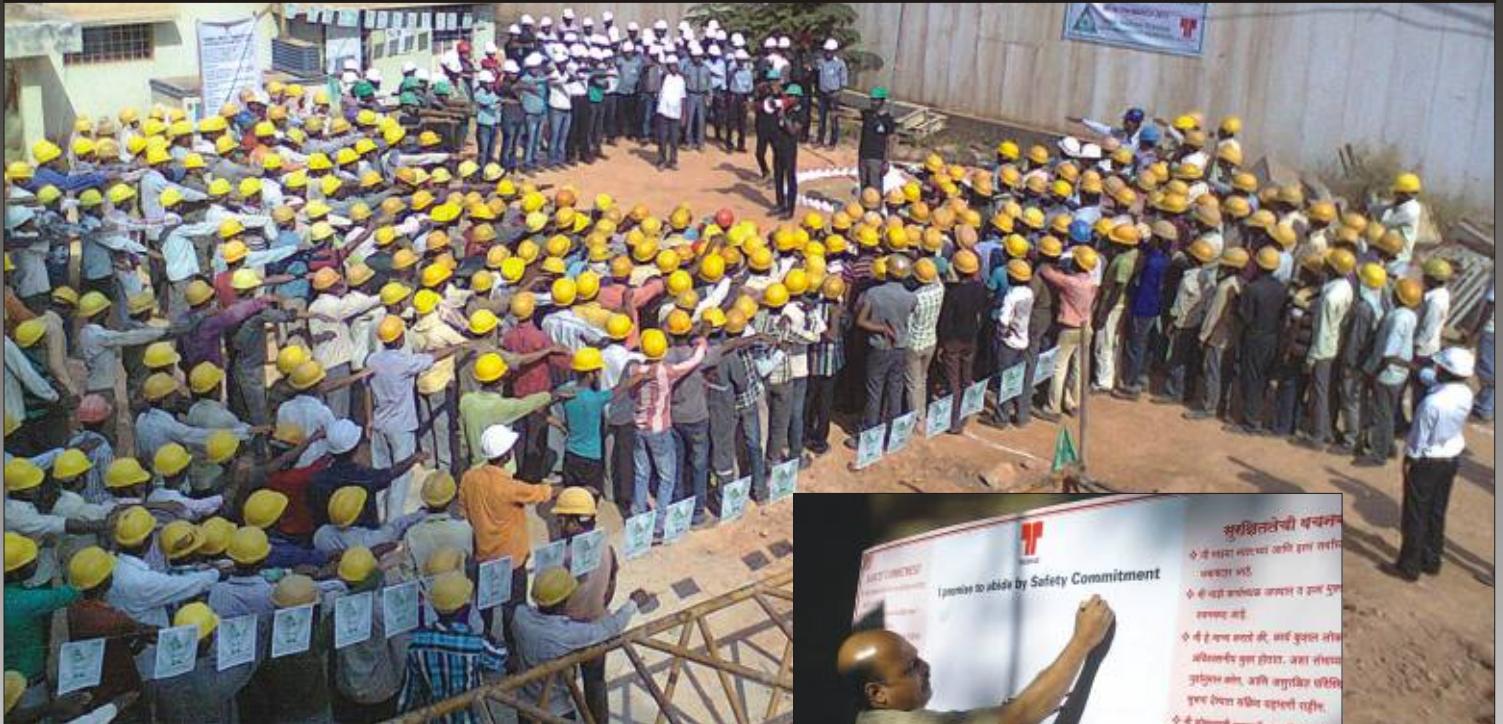
Over 15,000 men found themselves talking to the Atlanta Humane Society about an 8-week old black Labrador retriever.

SLICE
OF LIFE

And this poster inspired by a popular song



A groundswell of safety awareness



The 42nd National Safety Week found Thermax reaffirming its commitment to safety at all its project sites, manufacturing facilities and offices. The top management led the way in signing a safety commitment. Elsewhere, popular participation was marshalled through demonstrations of safe work practices, contests for spreading awareness and awards to honour exemplary practitioners. Glimpses from a week that reflected the organisation's allegiance to safety at all times.

Thermax HRSGs for Indonesian power plant



Heat recovery steam generators (HRSGs) supplied by Thermax are an integral part of the 130 MW combined cycle power plant set up by PT Bekasi Power in Jakarta in 2012.

The supplementary fired HRSGs (each of 85 TPH) installed behind two gas turbines and a steam generator convert the waste heat into steam which in turn generates power.

Thermax supplied the equipment to Internusa Technical Group Pte Ltd.

