

Eternal Bhoomi

Ecological Wisdom | Social Justice | Critical Thinking | Positive Action

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Mindful Travel

Why is Flying out of the Sustainability Discussion?
Soren Andersson

To Save the Future, Live in the Present
Wendell Berry

The Pope Deserves a Standing Ovation
Dr. Mercola

My Grandfather rode a camel

My father drove a car

I fly in a jet plane

My son will ride a camel...

- A Saudi Arabian saying

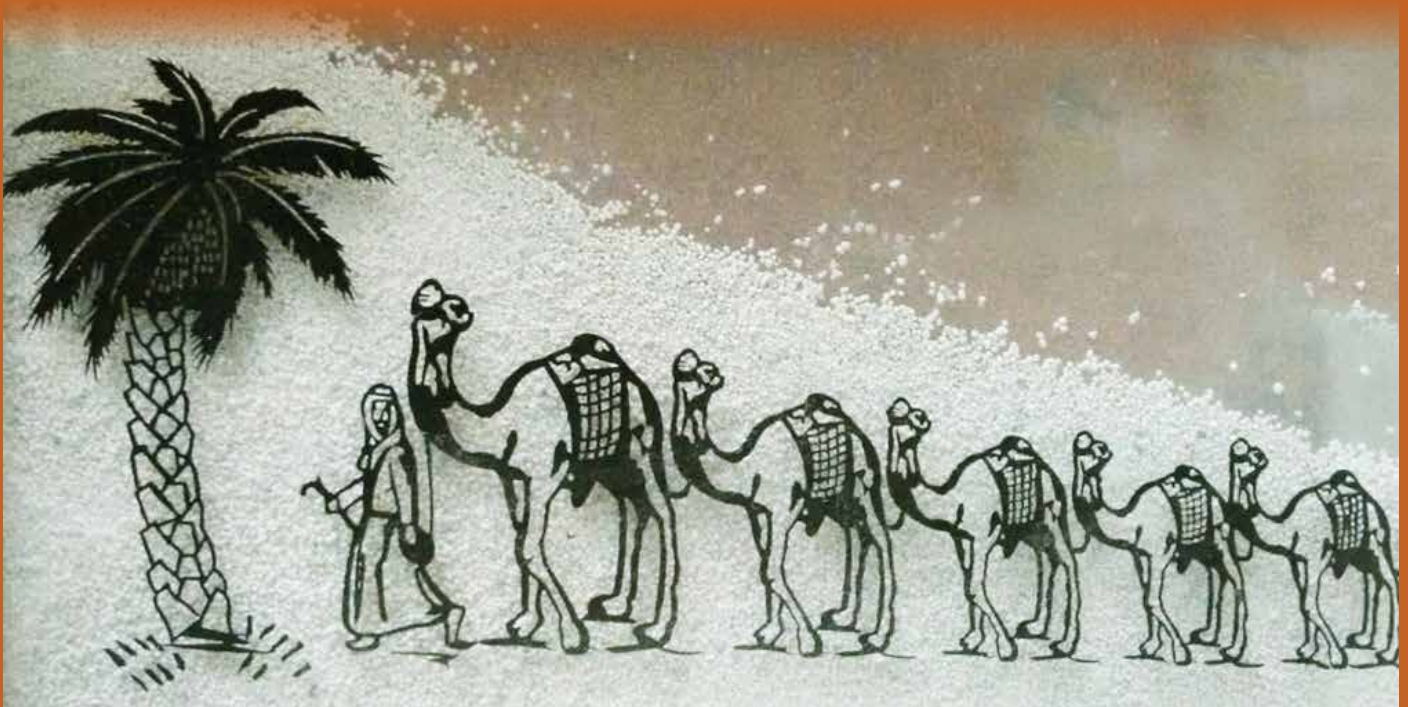




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How Much to Travel, How to Travel?

The Earth is bountiful and incredibly beautiful - beckoning to us to climb those mountains, watch wildlife at dawn, relax on that beach - after travelling half way across the planet. And there are people of exotic cultures, lovely old castles and other man-made wonders to admire. Add to that our human need to be enchanted by what is new and affordable, we have a great footloose civilisation. On an average over 8 million people fly every day, and if you travel by train, the station is so crowded that the whole world seems to be travelling. But hey, so are you!

When we googled “Mindful Travel”, what came up on top was mostly how to be careful when travelling abroad, respect other cultures, taste new foods and often, Buddhist teachings of observing, practising deep breathing, accepting and being mindful of everything we come across etc. Rarely a word about how much to travel or how to travel sustainably.

Yes, sustainable living is not easy. Thinking about sustainability and walking our talk is not just difficult, it is confusing. On the one hand travel and tourism is expected to provide livelihoods to many, so it may even be considered a bit of ‘do gooding’ to the underprivileged. And our families and communities are scattered across the world, and shouldn’t we be close to them, visit them? Conflicting information and ideas are so common - like an article on carbon emissions on one page of the newspaper and another article in the next page extolling a must-visit destination in Europe. So much so that we stop trying to make sense of the messages we are bombarded with.

So back to our question, how much to travel and how to travel?

Our writers in this issue, share different perspectives. Peter Owens muses on travelling as a pilgrim rather than as a tourist. Do we take or do we give as we travel? And when we take, how do we take - as consumers or seekers?

Francesca Baker invites us to do as the locals do, rather than carry our city with us. ‘Armchair travel’ by James Strohecker shows us perhaps the best way for us to travel without travelling, and maybe, settle some of our restlessness. In similar vein, Garima Bhatia talks of ‘Birding from your Balcony’.

Subsidised aviation fuel is what has made air travel so cheap; the nexus between big airline corporates and politics of oil is merrily fuelling air traffic - to over 10,000 flights a day, while carbon emissions keep rising. Soren Andersson writes about why flying is out of the sustainability discussion.

And food is being shipped or flown across the world, sometimes back and forth with some ‘value additions’, because transportation costs are kept artificially low, and economics does not recognise or acknowledge ecology. Devinder Sharma and our young intern, Roshan Benefo unravel some of the hidden stories of how food travel thousands of kilometers before it reaches our plate.

There is much more to understand about our addiction to travelling - in the world outside as well as within ourselves. We wish you happy reading.

Seetha Ananthasivan

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Eternal Bhoomi is committed to bringing you holistic perspectives on Nature and sustainability from renowned writers and thinkers as well as practical ideas and examples of earth conscious living from people around the world.

Mindful Travel

How do we hold mindful travel and a shrinking world simultaneously in times of numerous possibilities to travel far and wide? Articles in this issue focus on balancing our love for travel with love for Mother Earth...

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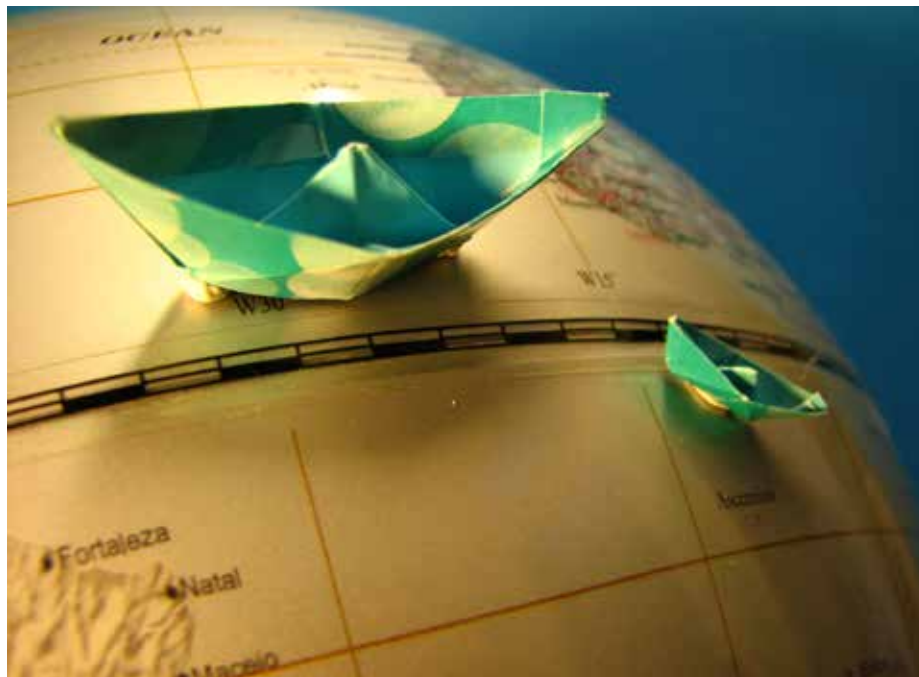
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Pilgrim or Tourist?

Photo Courtesy: Harwig HKD

Every act of travel is a journey into an intimate landscape, but that response of intimacy is earthed in the pilgrim, not in the tourist, writes **Peter Owen Jones**.

This time last year I was walking towards Hartland to meet Satish and sleeping in churches and barns. The year before last I was sent on a tour of the planet by the BBC for a programme called *Around the World in 80 Faiths*, and the year before that I spent some time alone in the desert in Egypt and lived for a month with sadhus in India.

So this year I thought it was high time I took a holiday. I booked a flight to Santorini, Greece. I thought I would sort out a room when I arrived. I took the train to Gatwick Airport from my nearest station, found the check-in desk and waited my turn in line. But the nearer I moved to the front, the more uneasy I became and just before it was my turn I slipped under the barrier and walked back through the airport to the station and took the next train home.

On the platform I met someone from my home village and confessed what I had just done. He looked me in the eye and declared that he would rather be dragged through the latrines of Glastonbury on the fourth day than get on an aeroplane. I returned home, unpacked my shorts and headed off to

the nearest beach, where I lay down on the shingle and watched my plane fly off before falling asleep for three hours. I still don't know why I did it but it gave me a window to think about the notion of why we need to get away to relax, and the more I considered it, the more perverse and insubstantial it became.

There is something deep within most of us that is continually drawn by this distance, and the history of humanity bears this out in the slow exodus from Africa. What our ancestors knew was that over that hill there had never been a human being before, and for hunter-gatherers that meant untouched foraging and hunting where they were guaranteed to be the first to the food. Maybe it was this that drove us on into the far reaches of the tundra, and over miles of ocean in boats no bigger than tables. The risks were so extraordinary that our ancestors might as well have been going to the moon, and we can only admire their incredible tenacity and spirit.

And still within us there is that urge to explore beyond. Do you remember doing it as a child? I do, and what is

important to remember is that whilst as adults we may think we know our surroundings, children know that they don't. I still remember the thrill of setting out one morning from my home to go beyond the furthest place in the fields behind my house that I had ever been before, to go into what were for me the unknown woods and fields. What perhaps the computer age has taken most from our children (and I notice it in my own children) is the calling to explore. Yes, the internet does give us the world at our fingertips, but it is a world without skies!

What drove the purpose of travel after human beings had found so much of the planet was trade, and that remains true today; it is the act of making money that forms the framework for world travel, whether that is business travel or tourism, and in any event there is, as far as I can see, barely any space between them now. We are effectively charged to visit most countries – it's called a visa. And when we do travel, we are not guests but tourists, and as a result we have chosen to pay for accommodation rather than accept true hospitality.

Within the Islamic faith there is a decree that the traveller is to be housed and fed for three days without charge, and, believe it or not, Christians too are supposed to offer the traveller food and rest. I now feel that with each new hotel we build we lose another drop of the milk of human kindness. The idea of luxury – of paying to be pampered – has been so very damaging to all of our humanity. Take a good long look at so-called luxury: it is cold, so cold. Those long lines of loveless ‘palaces’ strung out along some of the most beautiful beaches in the world.

The guest room should be the most important room in all of our houses.

Then over the hill, again in the distance, there in the folds of the hills is paradise. Paradise is a very powerful and beautiful idea within the human heart and psyche. Pilgrims are in fact journeying always towards it, with each step the world becoming brighter, more vivid and more mysterious.

For those of us living in beautiful rain-soaked England, paradise is presented as a tropical beach with coconut palms gently leaning over the white sand beside an aquamarine sea. And there just above the beach is that little banana-leaf-roofed house where happy people live far away from the land of winter.

Have you been to paradise? Have you been to that beach?

I saw it as a child in so many books, and as a man I went there. You’ll find paradise on the island of Tanna in the Vanuatu island chain, a four-hour flight from the east coast of Australia. Tanna is the most southerly island, and it has a live volcano. What I loved about visiting the volcano was the total absence of any health-and-safety notices! The winding and rutted track led up through increasingly vegetationless land, where sulphurous smoke was leaching through the soil. And then to the rim of the crater, which every three minutes would shower lava high above us.

Captain Cook was the first European to visit Tanna, mooring his ship in Resolution Bay, where the entire male population of the island lined up on the beach and mooned at him. (He chose not to go ashore.) At one end of Resolution Bay lies that village – there, just behind the sand: small houses with roughly thatched roofs. There is no

There is so little time in our society to reflect on what we have created and what we are creating. We have become totally enslaved by money and held to ransom by ‘the markets’ and it is as if all of us have surrendered to that way of thinking.

running water and no sanitation, there are no young people left (they have all gone to the main town on the island or further afield), and the poverty can be measured in flies.

When we in the West travel we take the West with us – we take our houses and our cars and our televisions and our discotheques and our shoes and our cameras. We carry all of that wherever we go, and we sometimes transplant what we think we need in somebody else’s garden. The Japanese have built an airport on Tanna, and a German company has built a hotel. Not that any of the men and women living on the island could ever afford to fly or to eat in the hotel’s dining room.

I’m not so sure we are exploring, really. I think we are still simply looking for food and hoping to trade. And as long as we are doing that, yes, we will see the coral and we will drink in the bars, but we will miss the miracle of intimacy because we are not being

intimate with what we are looking at. We are taking pictures and moving on; we are looking but we are not seeing. In truth, wherever we go we are immersed into the intimate strands of where we are, making every act of travel a journey into an intimate landscape. But the response of intimacy is earthed in the pilgrim, not in the tourist. The traveller perhaps journeys towards the pilgrim.

We now live in a world where we still have to travel to find food, and more and more of our lives are made what they are by journeys that other people have made on our behalf: the journey of the orange, the journey of the laptop, the journey of rice and peanuts. Very little of what we have comes from the land that surrounds us. But in that sense, with everything now brought to our door, why do we still travel? What are we looking for and hoping to find?

The idea of a holiday is really so very strange: the notion that we could find rest and peace and excitement

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Photo Courtesy: Ananth Somaich



One of the greatest illusions we still buy into is that paradise is there beyond the horizon. If you spoke to all who visit the South Downs, where I live, you would learn that they come here to find for a while what it is I go to Greece for...But for as long as we are content to buy into the illusion that it is elsewhere, we will never realise it here. And if our lives are so dull, so mundane and so bound by the demands of money that we have to leave just for a week's release, then something is terribly wrong with the manner in which we are living.

and new colours and new seas. It is the same sun that sets in Santorini as sets in the UK, and the sea is one sea simply called by different names. We travel to get away from our lives here – our 'being us here'. We travel in part still in the search for paradise, but also because when we take ourselves to a new place, somehow a little bit of what is new sinks in, and when we go away, the relief and the release can be quite incredible.

I would just ask for some breathing space now. There is so little time in our society to reflect on what we have created and what we are creating. We have become totally enslaved by money and held to ransom by 'the markets' and it is as if all of us have surrendered to that way of thinking. And this is where we need a completely new political language – a language that is fluent in intimacy and awake enough to know that each act is an act of creation.

So, as I said, I didn't get the plane. I stayed home.

One of the greatest illusions we still buy into is that paradise is there beyond the horizon. If you spoke to all who visit the South Downs, where I live, you would learn that they come here to

find for a while what it is I go to Greece for. So we are leaving to find 'it' and in so doing have forgotten we are already part of 'it' – it's here we live in 'it'. But for as long as we are content to buy into the illusion that it is elsewhere, we will never realise it here. And if our lives are so dull, so mundane and so bound by the demands of money that we have to leave just for a week's release, then something is terribly wrong with the manner in which we are living.

It is a madness that a Spanish waiter will go to Padstow to stay in a small hotel for a week and be waited on by a man who is leaving the following week for Spain to be waited on by him. What is going on?

We will never see the beauty of somewhere else until we have realised the beauty of where we are. If we believe we have to travel to a hammock in Mexico to find peace, the truth is we will never be at peace where we are. And until we can see the rain as wonderful, we will never appreciate all the finery of sunshine. Are we not in danger of being imprisoned by the very system that we are told is there to keep us free? Free on what and whose terms?

The travel industry offers us happiness paid for by misery. One week's excitement in exchange for forty weeks of drudgery.

Of course I applaud the idea of someone staying in a hotel or a community that is centred and living on ecological principles, and the more of these, the better. In a sense that's my greatest hope – that we go away and experience something of a greater humanity to all life and return with a heart full of fine intentions and changed by the experience, which is one of the greatest gifts of the pilgrim. We need a new political language, but I don't expect that to come from the politicians. It needs to be spoken by all of us.

What is missing is the act of taking care of the traveller: a culture of hospitality that has been so broken by our collective surrender to the mass market. I am a Christian and for me there is a different type of mass – it is a beautiful word called 'communion', and the true pilgrim is journeying towards a conscious state of communion.

I feel that the experience of the state of communion is where we are changed, and it is the journey into communion that we have all begun. Resurgence is a magazine about the new communion – the state of communion. The green revolution that is coming cannot just be about the way we treat the planet: it has to offer not only a new political language but also a new social paradigm. Part of that invites all of us to become better hosts, taking better care of each other.

As I said, the guest room should be the most blessed room in our homes.



Peter Owen Jones is an Anglican priest who has presented various BBC series, including *Around the World in 80 Faiths*, *How to Live a Simple Life*, and *Extreme Pilgrim*.

This article is based on a talk given by Peter Owen Jones at the Pilgrim or Tourist? Resurgence event in October 2010.

For details see www.resurgence.org/take-part/resurgence-events/summer-camp-2011.html

“We are travelers on a cosmic journey, stardust swirling and dancing in the eddies and whirlpools of infinity. Life is eternal.

We have stopped for a moment to encounter each other, to meet, to love, to share. This is a precious moment. A little parenthesis in eternity.”

The Alchemist, Paulo Coelho



Photo Credit: Jorge Quinteros



Why is Flying Out of the Sustainability Discussion?

Air travel entails 600 percent higher CO₂ emissions and double the primary energy use of travelling by train or car. Yet the heavy subsidies for airlines and exemption from carbon certification enable them to offer extremely low ticket prices. **Soren Andersson** elaborates on flying and sustainability.

We live in a global society where people and products continuously criss-cross the planet, but we seem to constantly exclude, or at least forget to mention, one of the means for this transportation in the sustainability discussion: air travel.

Here are some quick facts on flying (taken from the Web sites of the Air Transport Action Group; UNWTO, the United Nations World Tourism Organization; and the International Air Transport Association): There are 1,700 airline companies in the world, 23,000 airplanes and 3,750 airports. In 2012, the airlines carried over three billion passengers. Fifty-two percent of all international travel — 538,200,000 international airplane rides — was for leisure. Between 2011 and 2012, there was a five percent increase in air traffic. The airline sector accounts for two percent (689 million tons) of global CO₂ emissions.

But air travel is still excluded from sustainability discussions.

Is it because globalization is yet another thing we should not talk about too much when we discuss

sustainability, since the airline industry is an important economic driver?

Or is it that, as Conscious Travel blogger Anna Pollock writes, in “Six Reasons Why Mass Tourism is Unsustainable” (*The Guardian*, 21 August 2013): “Technological connectivity and price comparison engines have shifted purchasing power to consumers, who have been convinced, by repeated discounting, that cheap travel is now a right”?

Flying: a high-pollution activity

During summer and at vacation time, the media is full of flight travel bargains that promise to enable people to go farther and cheaper with air transport. And these offers are made not only by low-cost airlines, but almost all airline companies.

How is it that one of the most polluting means of transportation receives subsidies and is also, to a large extent, liberated from taxes, carbon emission-reducing programs and similar regulations?

Is this how governments and the market even out barriers to unequal

competitive opportunity? To get a picture of how flying compares with other means of transportation, I made a comparison for a journey from Copenhagen, in Denmark, to Genoa, in Italy. For the calculation I used the Web-based tool www.ecopassenger.org, which appears to be one of the most accurate and easy-to-use among those currently available in Europe. (A version is also available for freight calculation, at www.ecotransit.org.)

For this analysis, it turned out that the CO₂ emissions for train and car (assuming four passengers) are exactly the same and that the consumption of primary energy is lower in cars. (There are three other indicators which, although important, are smaller in their scale of impact.)

However, interestingly, one transportation mode — air travel — was quite off the charts. It entailed almost 600 percent higher CO₂ emissions (including high-altitude greenhouse gas impact) and almost double primary energy use. Flying is simply an unsustainable alternative.

It is incredible that this means

And, still, hardly a week passes without news being featured about some airline or other having financial problems... of the competition pushing prices down so low that airlines are finding it hard to achieve any profitability... of pilots being forced to work unreasonable hours...and of new security flaws detected.... And, all the while, we are flooded with advertisements for even cheaper flights...

of transportation is still heavily subsidized and excluded from the carbon certificate system, thus enabling airlines to offer extremely low ticket prices, while being the most polluting travel option.

Feeding the tourism sector

It's not only about the emissions, it's also about the habits air travel promotes.

UNWTO estimated, in their *Tourism Highlights* report that, in 2012, more than 1.035 billion international tourists had traveled and that most air travellers travelled for leisure purposes.

We already have seen the data on international leisure travel; the number rises when we add national flights to it. Then add a five percent growth rate for every year: that's at least 27 million airplane rides. The UN forecast is that international tourism will almost double to 1.8 billion travelers within the next 17 years. The latest news on the UNWTO home page shows an increase for the first four months of 2013 of 12 million travelers, compared to 2012.

UNWTO Secretary-General Taleb Rifai stated, "The 4.3 percent growth in the number of international tourists crossing borders in the first months of 2013 confirms that tourism is one of the fastest growing sectors of our times," and then used superlatives like "positive in all regions" and "star

performers" to refer to air travel in glowing terms.

Travelers love the low prices

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Today, it isn't unusual to hear people say, "We flew to Paris over the weekend at a price tag of €24.95 one-way! We just couldn't refuse it!" I'm a little bewildered: Why is the fastest but most energy-consuming and 'carbon-dirty' form of transport quite often also the cheapest? It doesn't make sense even from a purely capitalistic viewpoint!

Dire consequences

Let me think aloud: Should self-inflicted low pricing then be a reason to continue to avoid taxes and make it cheaper to pollute our atmosphere? And, because customers are repeatedly offered discounts, should people be convinced that cheap travel is a right, not a privilege? Should public opinion thus be in the airlines' favour?

Maybe we should fuel the planes

with bio-oil from the *Jatropha curcas* seeds, Babassu nuts or the coconut palm and clear an area larger than the size of France (547,000 sq. km.) somewhere in the tropics for such plantations? Maybe we can cut down rainforests, too, to keep pace with the increase in air traffic?

What about the world's climate? Remember George Orwell's words [in his 1941 essay, "The Lion and the Unicorn"]: "As I write, highly civilized human beings are flying overhead, trying to kill me."



Soren Andersson Born in the south of Sweden, he learnt early the power of Nature, the climate and living off the land. From 2007, Andersson has specialised in the Energy arena in his homeland and his work has increasingly convinced him of the futility of a goal-obsessed, gadget-centred, consumerist lifestyle. He now writes to promote sustainability and ameliorate climate change. He is a member of the Sweden Green Building Council.

UNWTO confirms that tourism is one of the world's fastest growing sectors and has praised successful airline industry players for aiding its growth.



Photo Courtesy: Joe Futrelle



Armchair TRAVEL

by Philip Carr-Gomm

Do we really need sacred places? In this age when we are being called to revere all the Earth, before it's too late, should we not abandon our desire to make pilgrimages to holy places? And if wherever we are is the 'Lotus Land', is the yearning to visit sacred places simply a spiritual red herring?

These were the questions that faced me when I accepted an offer to write a book about fifty sacred sites around the world. At first I was excited. I chose some 'old favourites' – the obvious candidates such as Stonehenge, the Pyramids and Mount Kailash – but I also wanted to write about sites that are less well-known, such as the extraordinary Chauvet cave in France, twice as old as its more famous counterpart at Lascaux, and filled with stunning artwork.

But why cover only ancient sites? All over the world people are creating new ones. Recently I was in Zuvuyaland in New Zealand, which had once been a bare field near Lake Taupo in central North Island but over the last few decades has been turned into a lush 'gift' to the world, with a stone circle, a goddess sculpture, winding paths, a stream and many new trees. And so I decided to include this in the book, along with the Tarot Garden in Tuscany, and Walden Pond in America, and the dazzling Temples of Humankind at Damanhur, which were built inside a mountain in Italy in secret during the 1980s.

I became even more enthusiastic about the book when I realised I could write not just about one sacred place at a time, but about entire sacred landscapes in which pilgrimages take place, so that, for example, rather than treating Stonehenge as one isolated site, readers could learn about it in the context of the whole of Salisbury Plain as a ritual landscape, and could be invited to explore the pilgrimage to Santiago de Compostela which takes in hundreds of miles of countryside, as does the annual journey of the Huichol in Mexico to Wirikuta, the "field of flowers", where they pick the peyote.

What a rich feast to research and present to readers! But then it happened – the turning of the coin, the inevitable revelation of the shadow. I was not prepared for this moment, which came when I decided to write a section on the Ganges as a sacred landscape, and there it was: the WWF warning that the Ganges could run dry by 2030, and an article entitled 'Pilgrims' Plague Destroying Himalayas' by a Canadian journalist saying that if she ever wrote a book about the fate

of the river it would be called *By the River Ganges I Sat Down and Wept*. She spoke of the way, with the increasing affluence of India, hundreds of thousands of pilgrims are contributing to the degradation of the environment at the source of the river high up at the Gangotri glacier.

Here is the problem: the advent of cheap air travel combined with increasing affluence and the information explosion on the internet has meant an exponential growth in both conventional religious pilgrimage and 'alternative' or 'New Age' pilgrimage. A few statistics convey the size of the ecological footprints involved: in 2000 70 million people journeyed to the Kumbh Mela in India, 6 million to Jerusalem and 2 million to Mecca, where, each year during the Hajj, 20,000 water trucks around the city distribute 50 million bags of cooled water and ice packs, and over 1,200 buses help to transport pilgrims to 44,000 air-conditioned tents for their two nights in the desert.

Our desire to visit sacred places has resulted in the creation of yet another industry that is pushing us all to the brink of environmental collapse. And yet doesn't visiting sacred sites help us to appreciate our world and the contribution of spiritual teachers and great civilisations? Isn't pilgrimage often a key component in many religions and an important spiritual practice in itself? Doesn't bathing in the aura of these sites heal and inspire us, making us better people? How can we honour these concepts and respect the Earth at the same time?

However much we try to inhibit the urge to visit such places, it won't work – our need for them seems to be innate. In the Sikh scriptures, an attempt is made to curb acts of pilgrimage, with the guru Granth Sahib saying: "I do not go to see sacred shrines of pilgrimage, or bathe in the sacred waters; I do not bother any beings or creatures. The Guru has shown me the sixty-eight places of pilgrimage within my own heart, where I now take my cleansing bath." Despite the beauty and wisdom of these words, still we thrill to the idea of visiting a holy site.

Acceptance is always a good place to start any work, and so I began to write about each site including both the 'good news' and the 'bad news'. On deciding to write about the Sierra Nevada de Santa Marta region in Colombia, I contacted Alan Ereira, who, twenty years ago, produced a powerful BBC documentary and book called *From the Heart of the World: The Elder Brothers' Warning* which spoke about the Sierra's inhabitants, the Kogi, who had decided to warn the world of impending environmental disaster. More sad news came from him, but hopeful news too – of the land the Kogi have been able to reclaim as a result of the publicity they received.

Slowly a picture began to emerge that, like any relationship, our interaction with sacred sites can either be harmful or beneficial, depending on the awareness brought to the relationship. A good example of this is the sacred island of Kaho'olawe in Hawaii which, despite its value to Indigenous peoples, became a US Navy range in the Second World War. However, thanks to grassroots initiatives, it is now being cleared of ordnance and reforested, and is becoming a place of pilgrimage and ritual once more. Spiritual care and concern can effect real change.

Those who have followed a teacher know that being in the teacher's physical presence can be inspirational, but that the real connection is at the level of soul and in the inner world. Perhaps in the same way we need to work with sacred sites at a soul level, still making physical journeys to them when the call is strong, but building the bond primarily in the inner world and in consciousness. Just as we are impressed by tales of adepts in the Tibetan fastnesses who can journey at will in their spirit-bodies to any location on Earth while remaining in their meditation caves, so now, perhaps, we can try to emulate them and reinterpret the concept of armchair travel so that it becomes a spiritual activity.

Try flying to a sacred site on Google Earth – flying up the Brahmaputra, for example, to enter Tibet and swoop over the Potala Palace. Then view a series of crystal-clear 360-degree panoramas of the palace at www.world-heritage-tour.org.

Afterwards read about the Dalai Lama's secret palace behind the Potala. Then close your eyes and go there in your imagination, and perhaps in your spirit too. If you connect with sacred places in this inner way, they can start to reveal themselves to you, to speak to you. Maybe one day you will visit them, maybe not, but the connection will be there nevertheless. Spiritually you will have 'plugged into' a network that covers the planet, and that is linked by lines of energy that create a matrix around the globe.

"Think globally, act locally" has become one of the most profound injunctions for our age. And while feeling connected to this great matrix of sacred places around the world, we can turn our attention to our own landscapes – taking care of a local sacred site, clearing it of rubbish and visiting it often. We know that all the Earth is sacred, and, like the creators of Zuvuyaland, we can help to create new sacred places in our homes and gardens, and with our neighbours at the end of our street.



Philip Carr-Gomm met his first spiritual teacher, Ross Nichols, the founder of The Order of Bards, Ovates and Druids (OBOD), when he was 11, and joined the Order when he was 18. Carr-Gomm founded The Esoteric Society in London in his twenties. In his thirties, Carr-Gomm discovered psychosynthesis, training as a therapist at the Institute of Psychosynthesis in London. In 1988, he was asked to lead OBOD. Since then, OBOD has become the world's largest Druid teaching order.

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New York Panorama

Photo Courtesy: Chris Devers

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Photo Courtesy: Creative Commons



Devinder Sharma writes on the dangers of food shipped across continents – grown in one, processed and repacked elsewhere and shipped back to the country from where it all started.

“Supermarkets excel in globetrotting for food products, taking advantage of cheap processing costs and massive fuel subsidies and remaining unmindful of the carbon footprint they generate,” he says.

Why is food allowed to travel across continents?

Why not popularise local products and local markets?

Some decades back, I had written on how Pepsi was shipping its used PET bottles, used for packing soft drinks, to Chennai, in India, for recycling. These bottles would then, again, be shipped back to the US for use. Pepsi took this detour for recycling PET bottles simply because recycling of plastic waste is not easily allowed in the US (it has very stringent norms), for health and environmental reasons, and obviously adds to the cost.

Later, in 1994, I remember reading an excellent report *Food Miles*, produced by Sustain. It told us about the dangers of food shipped across continents – grown in one, processed and repacked

elsewhere and shipped back to the country from where it all started. There were several glaring examples provided, which should have woken up the policy-makers and, of course, the economists (who talk of everything but make little sense). Food, on an average, travels 3,000 miles before it reaches your plate. This very fact was such a startling revelation that it should have made consumers to rethink; but, somehow, it did not. The report has been updated and republished and you can have a copy from <http://www.sustainweb.org/publications/?id=191>.

Yesterday, Zac Goldsmith forwarded a tweet that reminded me of the hidden cost of the global food transport system. The Sunday Times had, several years back, reported how British prawns were being shipped to China for hand-shelling and then shipped back to the UK for consumers. Supermarkets are excelling in globetrotting for food products, taking advantage of cheap processing costs (and massive fuel subsidies) and remaining unmindful of the carbon footprint they generate, in the process.

Take this example. The Trade Craft coffee that supermarket chain Sainsbury sells in its stores is grown in Bukoba, Tanzania. The coffee beans then travel 656 km to Dar-es-Salaam, from where it is shipped to Vijayawada, in Andhra Pradesh. Vijayawada is about 3,250 miles from Dar-es-Salaam. In Vijayawada, the beans are packed. They are then shipped to Southampton, in UK, which is about 5,000 miles away. From Southampton, the coffee goes to Leeds, from where it is redistributed to Sainsbury stores worldwide. I am sure, with the approval granted for FDI in retail in India, Sainsbury will find it convenient to ship the packed coffee from Leeds to New Delhi. (You can read the news report here: <http://www.airportwatch.org.uk/?p=1116>)

Isn't it time, therefore, to do a serious rethink of our international trade policies? I have been saying for long that the World Trade Organization (WTO) and climate negotiations actually work at cross-purposes. While WTO pushes for more of such trade, it doesn't pay any heed to the carbon footprint such trade generates and the impact it has on global warming. Neither do climate negotiators call for restricting such unwanted trade, as a precursor of climate control standards.



Photo Courtesy: Creative Commons

While WTO pushes for more of such trade, it doesn't pay any heed to the carbon footprint such trade generates and the impact it has on global warming. Neither do climate negotiators call for restricting such unwanted trade, as a precursor of climate control standards.

I have never understood the logic of allowing apples to be imported all the way from New Zealand and Chile into India when there are no takers for apples from Himachal Pradesh and Kashmir. Similarly, what is the logic behind allowing Washington apples to be exported to India, while Chinese apples travel all the way to the US, controlling roughly 45 percent of the US market? Food globetrotting is happening because aviation fuel is dirt cheap. Many have said that aviation fuel actually works out cheaper than Coke!

Creating and popularising local markets is perhaps the only viable alternative to the madness of making food travel across the globe. Consumers have a very important role to play here. Try to avoid being lured by products that claim to have brought you the same processed goods from far away that otherwise is grown in your neighbourhood. Keep a close watch on this. Why go for a processed orange drink from Chile or the US when you have enough of the fresh and tasty juice in your local market? Make sensible choices, and you would have played your small but effective part in limiting the global carbon footprint.



Devinder Sharma is a distinguished food and trade policy analyst and an award-winning Indian journalist, writer, thinker and researcher well-known and respected for his views on food and trade policy.

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He is also a member of Bhoomi Advisory Board.

Taken from a post by Devinder Sharma on 14 January 2013 at <http://devinder-sharma.blogspot.in/2013/01/to-save-on-global-warming-why-food-is.html>

WHEN ON A RESPONSIBLE HOLIDAY, *do as the locals do*

Francesca Baker



Photo Courtesy: Francesca Baker

When visiting a country you are exactly that: a visitor, not a local – correct? But putting yourself in the mindset of a local person not only results in a more authentic, thrilling and enlightening experience for you, but allows for a more sustainable tourist economy for the destination.

One of the easiest ways to travel like a local is to travel with a local. Meeting up with inhabitants of your destination and exploring the sights and surroundings with them provides a lens on a place that you may not have been privy to otherwise. Companies such as Tours By Locals, Global Greeter or Unseen Tours, where homeless people are the guides, act as facilitators between visitors and local guides, pairing up those who will be most suited and letting them explore together.

You will get a unique perspective on a city (even hearing how the voices of my Vietnamese guides dipped

when discussing communism was fascinating), visit places off the beaten track, and drink in local bars. None of which your guide book can enable. It's all about getting a feel for a place, the people, the politics, the culture, food and the way of life.

Culture is not part of the past, but living and evolving. Often we think of a country's culture as that of historic importance, and whilst a past is hugely influential on the present, the present is pretty important, too. Picking up local magazines and listings guides enables you to step away from this and engage in the activities that your contemporaries in 2013 are doing, not

those from the days of yore. The latest art exhibitions, music movements and even cinema screenings can be hugely revelatory about a country and its people.

Put yourself in the local mindset and share in activities and experiences as locals do. Ticking off the guidebook must-sees can be draining, so don't – explore what interests you in the different surroundings you find yourself in.

One of my first experiences of travelling local was back in 2008 in Romania. Chatting to an American man on a public bus, he laughed at us visiting a palace.

"Are you not?" I asked. "I saw everything the first time I came. This time I want to feel it." Another way to see more is literally by travelling. Get that public bus, take a bike, and walk. Save yourself money and see the sights. The coins you do spend will go on local infrastructure rather than tour companies, both enhancing public and tourist facilities.

Ensuring that your money benefits the right people is one of the most important ways to ensure a sustainable travel economy and local business development. This increases the opportunities to retain local values and practices within business models rather than being mass produced.

Let's not forget why many of us travel, and one of the best things about it: food. Trying new dishes and sampling never tasted before cuisines is a delight, and can be done more authentically, and not to mention more cheaply, in local restaurants.

New foods eaten whilst watching the world go by is a travel highlight. I would never have discovered rice paste and shrimp parcels in banyan leaves in Vietnam, timpana in Malta, or black bean sushi in São Paulo without stepping off the tourist track.

Pick somewhere a few streets away from the tourist sites. Listen to the chatter from within – do you understand it? If not, it is likely to be local, and usually by default, pretty good. In some places it is best to ensure that you can see the food being cooked,



Photo Courtesy: Shubhojitt

With intimate and in-depth knowledge of a destination, and the passion to reveal its depth to you, a local guide is the best window to any place.

and cleanly, but more often than not you will be safe from tummy trouble.

There is an economic benefit to you, too. Tourist mark-ups on menus can be avoided; you don't visit the tourist shows or tat; and by staying with locals you can really save money. The acclaimed Couchsurfing lets you really get into a local way of living, and even if you are not keen on staying on a sofa, they organise numerous events and meet-ups to get involved in. If you prefer a home to yourself try Airbnb, a rental service for local homes or even home swapping. With intimate and

in-depth knowledge of a destination, and the passion to reveal its depth to you, a local guide is the best window to any place. "A tour guide should be more than just a guide", said mine in Ho Chi Minh City recently. "They should be your friend."

Charm and personality go a long way to making a trip, and are more readily available in a person than mass produced guidebook. A charming holiday – what could be better than that?



Photo Courtesy: Vivek Thakyal

Culture is not part of the past, but it is living and evolving...

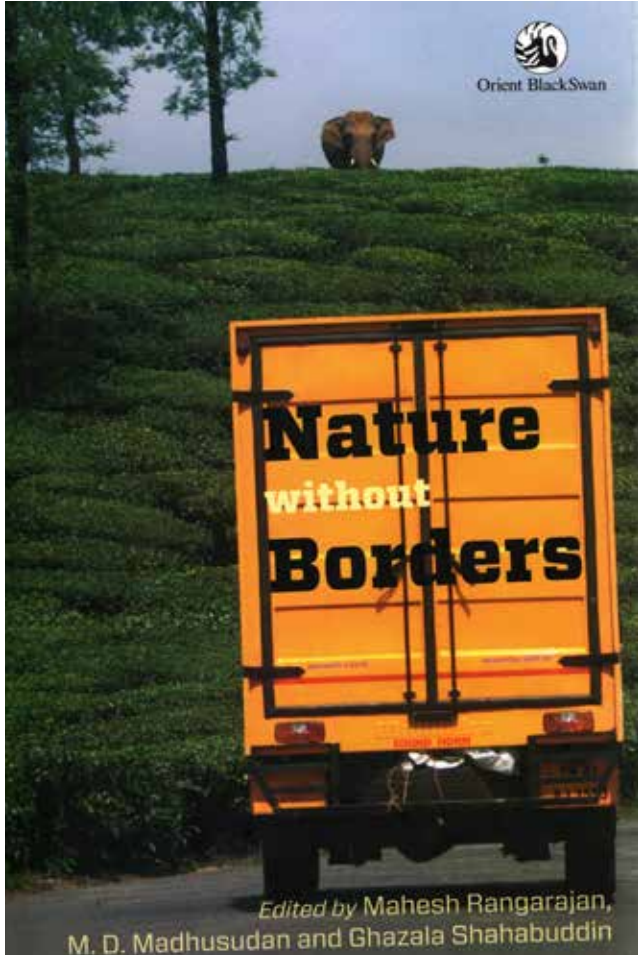


Francesca Baker is a freelance journalist, event organiser, and minor marketing whizz. She writes about music, literature, life, travel, art, London, and other general musings, and organises events that contain at least one of the above. You can find out more at www.andsothink.co.uk.

Recognising the interlinkages between culture and conservation

Nature without Borders

Murali Sivaramakrishnan



Nature without Borders, eds.

Rangarajan, Mahesh, et al.

Hyderabad, Telengana: Orient Blackswan, 2014.

Nature appears to be simple; but she is, in reality, complex. To understand the way Nature works is by recognising the interconnectedness and limitlessness of everything in Nature. These days, public debate on issues relating to global warming, environmental degradation and the necessity to preserve what is left of biological diversity are very common. Discussion on defining and redefining ecologically sensitive areas and on the inordinate and unprecedented deterioration of human-Nature boundaries are rife. Understanding ecological structure and function has never been such an urgent imperative for a safe future for all life. And *Nature without Borders* addresses this in a timely and relevant manner.

Nature without Borders tells us that by maintaining green pockets or isolated reserves alone, humans cannot

sustain the processes and functions at the core of the ecosystem and thereby forestall environmental disasters. It is only by inquiring into ecology, economics and culture and asking how they are interwoven that we do so.

Eight essays, prefaced by a substantial introduction, comprise the book. The essays deal with the human-Nature nexus in complex terrains — across snow-clad mountains and deep jungles, through pastures, farmlands and urban spaces. Black sheep, the grey wolf, Sarus cranes, marine life forms, fish, dolphins and the elusive snow leopard figure in the pages of this impressive collection of seminal articles.

In their study of trawling and fishing, the authors draw attention to how the use of modern technology has promoted the inordinate squandering of marine life. Although known marine extinctions are far fewer than terrestrial ones, extensive commercial fishing has led to the collapse of about a thousand populations that once supplied the world's seafood.

The Sarus crane is a majestic six-foot tall bird, found largely in the rice-wheat landscape of the Gangetic floodplains of North India, that is threatened globally. The essay that deals with this bird and its environment pleads for an integrated awareness of cultivation and conservation. The large cultivated tracts of Uttar Pradesh

Eight seminal essays comprise the book — on the human-Nature nexus in complex terrains: snow-clad mountains, deep jungles, pastures, farmland, urban spaces, black sheep, the grey wolf, Sarus cranes, fish, dolphins, other marine life and the snow leopard. The authors point to the damage modern technology has caused to marine life through excessive commercial fishing.



Annual mass migration of North America's monarch butterflies

Photo Courtesy: Sandy/ Chuck Harris



Wildlife conservation has always been threatened by the expansion of agriculture and landscapes fragmented by plantation crops and the human-Nature conflicts arising from this. So this book argues for a conservation ecology that critically appreciates the interlinkages between human ecology, history, culture and changing social dynamics.

are ideal for the Sarus and the local peoples' way of life, conducive to their survival. The crane, whose largest population in the world occurs in UP. Every bit of this habitat is shared with over 199 million humans (living at a density of over 800 people per square kilometre) and 57 million livestock. Two aspects of farmer behaviour — retaining wetland patches of all sizes and maintaining a positive attitude toward the majestic cranes — are critical for the bird's survival.

The mountain ranges of the north and west host an array of wild sheep, antelope, gazelle and wild goats. This is also a terrain that is interwoven with the lives of predator and prey, wild and domestic spaces, and herding and trading. It is here that the most elusive and most beautiful of the big cats, the snow leopard, also lives. This most camera-shy big cat, first filmed in the wild as recently as the 1970s, treads the same mountainous paths as humans and livestock. And, unlike the territories inhabited by the elephant and the tiger (terrain that comprises ecological 'islands' and which human habitations abut, endangering the species, hampering their natural movement and threatening their survival), the snow leopard's terrain spills over vast areas beyond its conservation range. In fact, the snow leopard depends heavily on livestock raised and reared by humans.

Wildlife conservation has always been threatened by the expansion of agriculture and landscapes fragmented by plantation crops. The primary pro-conservation response to this has been the creation of protected areas such as national parks, sanctuaries and reserves, which come

with added restrictions on resource use. We are given to understand that over 1,00,000 protected areas covering roughly 18.8 million square kilometres (12 percent of the earth's terrestrial surface) have been set aside worldwide to preserve natural areas. However, considerable biological density exists also outside these bounded territories, in human-modified habitats like plantations and farmlands. Thus, there is always the probability of human-Nature conflict, with Nature never playing by the book.

"Restoring Nature: Wildlife conservation in Landscapes Fragmented by Plantation Crops in India" is a seminal essay that deals with such contexts and conflicts in an area of great regional and global significance, the Western Ghats. The authors highlight well-researched findings and engage with ongoing interventions, arguing for extending conservation beyond borders and territories in such a manner that tigers, leopards, elephants and people may coexist in a vibrant mosaic.

And any inquiry into conservation ecology calls for the critical appreciation of this interlinkage. Nature spans borders, rather than spill over them, and people remake the land not as and when they please, but as a contingent result of a series of challenges and choices made due to a myriad factors. Thus, in order to get the bigger picture, we need to allow ourselves to be enriched by various perspectives that draw on human ecology, history, culture and changing social dynamics.

This is a sensitive collection of essays centred on a very pragmatic approach, be it about the conservation ecology of wolves or the fight for an urban forest in Delhi. The notion of borders makes little sense to Nature. However, as the editors argue, the borders within which we have tried to sequester her against the siege of human demographic and economic growth are important symbols, for they remind us of what we would like to secure and against what. As we close the book, we feel the wisdom of the poet emerging: when we build walls, what are we walling in — or out?



Dr Murali Sivaramakrishnan is Professor and Head of the Department of English at Pondicherry University. A poet, writer, painter, critic and specialist in Indian aesthetics and literary theory, Dr Sivaramakrishnan started writing at a very young age, drawing inspiration from natural history, especially ornithology.

He has exceptional talent for sketching and painting. His early poems are replete with the imagery of Nature: animals and birds, mountains and forests, and the sea and the sky find their place in his works, alongside humans.

Wendell Berry on Climate Change: To Save the Future, Live in the Present



Editor's note: Following is a two-part excerpt from Berry's new book *Our Only World* (Berkeley, CA: Counterpoint Press, 2015). The first part was written in 2013 and the second, in 2014.

Part I

So far as I am concerned, the future has no narrative. The future does not exist until it has become the past. To a very limited extent, prediction has worked. The sun, so far, has set and risen as we have expected it to do. And the world, I suppose, will predictably end, but all of its predicted deadlines, so far, have been wrong.

The End of Something — history, the novel, Christianity, the human race, the world — has long been an irresistible subject. Many of the things predicted to end have so far continued, evidently to the embarrassment of none of the predictors. The future has been equally, and relatedly, an irresistible subject. How can so many people of certified intelligence have written so many pages on a subject about which nobody knows anything? Perhaps we need a book — in case we don't already have one — on the end of the future.

None of us knows the future. Fairly predictably, we are going to be surprised by it. That is why "Take...no thought for the morrow..." [from the

Bible, Matthew 6:34 — Ed.] is such excellent advice. Taking thought for the morrow is, fairly predictably, a waste of time.

I have noticed, for example, that most of the bad possibilities I have worried about have never happened. And so I have taken care to worry about all the bad possibilities I could think of, in order to keep them from happening. Some of my scientific friends will call this a superstition, but if I did not forestall so many calamities, who did? However, after so much good work, even I must concede that by taking thought for the morrow we have invested, and wasted, a lot of effort in preparing for morrows that never came. Also by taking thought for the morrow we repeatedly burden today with undoing the damage and waste of false expectations — and so delaying our confrontation with the actuality that today has brought. If using less energy would be a good idea for the future, that is because it is a good idea.

The question, of course, will come: If we take no thought for the morrow,

Many of the things predicted to end have so far continued, evidently to the embarrassment of none of the predictors. The future has been equally, and relatedly, an irresistible subject. How can so many people of certified intelligence have written so many pages on a subject about which nobody knows anything?

None of us knows the future. Fairly predictably, we are going to be surprised by it. That is why "Take...no thought for the morrow..." is such excellent advice. Taking thought for the morrow is, fairly predictably, a waste of time.

how will we be prepared for the morrow?

I am not an accredited interpreter of Scripture, but taking thought for the morrow is a waste of time, I believe, because all we can do to prepare rightly for tomorrow is to do the right thing today.

The passage continues: "for the morrow shall take thought for the things of itself. Sufficient unto the day is the evil thereof." The evil of the day, as we know, enters into it from the past. And so the first right thing we must do today is to take thought of our history. We must act daily as critics of history so as to prevent, so far as we can, the evils of yesterday from infecting today.

Another right thing we must do today is to appreciate the day itself and all that is good in it. This also is sound biblical advice, but good sense and good manners tell us the same. To fail to enjoy the good things that are enjoyable is impoverishing and ungrateful.

The one other right thing we must do today is to provide against



Photo: Carl Gierstorfer

The Ghazipur landfill, Delhi, one of the city's biggest and oldest

Maybe we could give up saving the world and start to live savingly in it. A steady stream of poisons is flowing from our croplands into the air and water. The land itself continues to flow or blow away, and in some places erosion is getting worse. High grain prices are now pushing soybeans and corn onto more and more sloping land, and “no-till” technology does not prevent erosion on continuously cropped grainfields.

want. Here the difference between “prediction” and “provision” is crucial. To predict is to foretell, as if we know what is going to happen. Prediction often applies to unprecedented events: human-caused climate change, the end of the world, etc. Prediction is “futurology.” To provide, literally, is to see ahead [from Latin *providere* ‘foresee, attend to’, from *pro-* ‘before’ + *videre* ‘to see’]. But in common usage it is to look ahead. Our ordinary, daily understanding seems to have accepted long ago that our capacity to see ahead is feeble. The sense of “provision” and “providing” comes from the past, and is informed by precedent.

All we can do to prepare rightly for tomorrow is to do the right thing today.

Provision informs us that on a critical day — St Patrick’s Day, or in a certain phase of the moon, or when the time has come and the ground is ready — the right thing to do is plant

potatoes. We don’t do this because we have predicted a bountiful harvest; history warns us against that. We plant potatoes because history informs us that hunger is possible, and we must do what we can to provide against it. We know from the past only that, if we plant potatoes today, the harvest might be bountiful, but we can’t be sure, and so provision requires us to think today also of a diversity of food crops.

What we must not do in our efforts of provision is to waste or permanently destroy anything of value. History informs us that the things we waste or destroy today may be needed on the morrow. This obviously prohibits the “creative destruction” of the industrialists and industrial economists, who think that evil is permissible today for the sake of greater good tomorrow. There is no rational argument for compromise with soil erosion or toxic pollution.

For me — and most people are like me in this respect — “climate change” is an issue of faith; I must either trust or distrust the scientific experts who predict the future of the climate. I know from my experience, from the memories of my elders, from certain features of my home landscape, from reading history, that over the last 150 years or so the weather has changed and is changing. I know without doubt that to change is the nature of weather.

Just so, I know from as many reasons that the alleged causes of climate change — waste and pollution — are wrong. The right thing to do today, as always, is to stop, or start stopping, our habit of wasting and poisoning the good and beautiful things of the world, which once were called “divine gifts” and now are called “natural resources.” I always suppose that experts may be wrong. But even if they are wrong about the alleged human causes of climate



Chevron leaves a toxic legacy: After the oil major ended drilling operations in Ecuador's Amazon rainforest in 1992, it did not remedy the environmental disaster it had caused

change, we have nothing to lose, and much to gain, by trusting them.

Even so, we are not dummies, and we can see that for all of us to stop, or start stopping, our waste and destruction today would be difficult. And so we chase our thoughts off into the morrow where we can resign ourselves to “the end of life as we know it” and come to rest, or start devising heroic methods and technologies for coping with a changed climate. The technologies will help, if not us, then the corporations that will sell them to us at a profit.

I have let the preceding paragraph rest for two days to see if I think it is fair. I think it is fair. As evidence, I will mention only that, while the theme of climate change grows ever more famous and fearful, land abuse is growing worse, noticed by almost nobody. Maybe we could give up saving the world and start to live savingly in it.

A steady stream of poisons is flowing from our croplands into the air and water. The land itself continues to flow or blow away, and in some places erosion is getting worse. High grain prices are now pushing soybeans and corn onto more and more sloping land, and “no-till” technology does not prevent erosion on continuously cropped grainfields.

Climate change, supposedly, is recent. It is apocalyptic, “big news,” and the certified smart people all are talking about it, thinking about it, getting ready to deal with it in the future.

Land abuse, by contrast, is ancient

as well as contemporary. There is nothing futurological about it. It has been happening a long time, it is still happening, and it is getting worse. Most people have not heard of it. Most people would not know it if they saw it.

The laws for conservation of land in use were set forth by Sir Albert Howard in the middle of the last century. They were nature’s laws, he said, and he was right. Those laws are the basis of the 50-Year Farm Bill, which outlines a program of work that can be started now, which would help with climate change, but which needs to be done anyhow. Millions of environmentalists and wilderness preservers are dependably worried about climate change. But they are not conversant with nature’s laws, they know and care nothing about land use, and they have never heard of Albert Howard or the 50-Year Farm Bill.

Part II

If we understand that Nature can be an economic asset, a help and ally, to those who obey her laws, then we can see that she can help us now. There is work to do now that will make us her friends, and we will worry less about the future. We can begin backing out of the future into the present, where we are alive, where we belong. To the extent that we have moved out of the future, we also have moved out of “the environment” into the actual places where we actually are living.

If, on the contrary, we have our minds set in the future, where we are

Our nature seems to require us to hope that our life and the world’s life will continue into the future. Even so, the future offers no validation of this hope. That validation is to be found only in the knowledge, the history, the good work, and the good examples that are now at hand.

We must act daily as critics of history so as to prevent, so far as we can, the evils of yesterday from infecting today.

sure that climate change is going to play hell with the environment, we have entered into a convergence of abstractions that makes it difficult to think or do anything in particular. If we think the future damage of climate change to the environment is a big problem only solvable by a big solution, then thinking or doing something in particular becomes more difficult, perhaps impossible.

It is true that changes in governmental policy, if the changes were made according to the right principles, would have to be rated as big solutions. Such big solutions surely would help, and a number of times I have tramped the streets to promote them, but just as surely they would fail if not accompanied by small solutions. And here we come to the reassuring difference between changes in policy and changes in principle. The needed policy changes, though addressed to present evils, wait upon the future, and so are presently nonexistent. But changes in principle can be made now, by so few as just one of us. Changes in principle, carried into practice, are necessarily small changes made

“Life as we know it soon will end. If the governments don’t stop us, we’re going to destroy the world. The time is coming when we will have to do something to save the world. The time is coming when it will be too late to save the world.

There is in fact much at hand and in reach that is good, useful, encouraging, and full of promise, although we seem less and less inclined to attend to or value what is at hand. We are always ready to set aside our present life, even our present happiness, to peruse the menu of future exterminations.

If the future is threatened by the present, which it undoubtedly is, then the present is more threatened, and often is annihilated, by the future.



Photo: Kate Evans/CIFOR

Near Rio Branco, Acre, Brazil: A bird's-eye view of the stark contrast between forest and agricultural land

at home by one of us or a few of us. Innumerable small solutions emerge as the changed principles are adapted to unique lives in unique small places. Such small solutions do not wait upon the future. Insofar as they are possible now, exist now, are actual and exemplary now, they give hope. Hope, I concede, is for the future. Our nature seems to require us to hope that our life and the world's life will continue into the future.

Even so, the future offers no validation of this hope. That validation is to be found only in the knowledge, the history, the good work, and the good examples that are now at hand.

We must act daily as critics of history so as to prevent, so far as we can, the evils of yesterday from infecting today.

There is in fact much at hand and in reach that is good, useful, encouraging, and full of promise, although we seem less and less inclined to attend to or value what is at hand. We are always ready to set aside our present life, even our present happiness, to peruse the menu of future exterminations. If the future is threatened by the present, which it undoubtedly is, then the present is more threatened, and often is annihilated, by the future. "Oh, oh, oh," cry the funerary experts, looking ahead through their black veils. "Life as we know it soon will end. If the governments don't stop us, we're going to destroy the world. The time is coming when we will have to do something to save the world. The time is coming when it will be too late to save the

world. Oh, oh, oh." If that is the way our minds are afflicted, we and our world are dead already. The present is going by and we are not in it. Maybe when the present is past, we will enjoy sitting in dark rooms and looking at pictures of it, even as the present keeps arriving in our absence.

Or maybe we could give up saving the world and start to live savingly in it. If using less energy would be a good idea for the future, that is because it is a good idea. The government could enforce such a saving by rationing fuels, citing the many good reasons, as it did during World War II. If the government should do something so sensible, I would respect it much more than I do. But to wish for good sense from the government only displaces good sense into the future, where it is of no use to anybody and is soon overcome by prophecies of doom. On the contrary, so few as just one of us can save energy right now by self-control, careful thought, and remembering the lost virtue of frugality. Spending less, burning less, traveling less may be a relief. A cooler, slower life may make us happier, more present to ourselves, and to others who need us to be present. Because of such rewards, a large problem may be effectively addressed by the many small solutions that, after all, are necessary, no matter what the government might do. The government might even do the right thing at last by imitating the people.

In this essay and elsewhere, I have advocated for the 50-Year Farm

Bill, another big solution I am doing my best to promote, but not because it will be good in or for the future. I am for it because it is good now, according to present understanding of present needs. I know that it is good now because its principles are now satisfactorily practiced by many (though not nearly enough) farmers. Only the present good is good. It is the presence of good—good work, good thoughts, good acts, good places—by which we know that the present does not have to be a nightmare of the future. "The kingdom of heaven is at hand" because, if not at hand, it is nowhere.



Wendell Berry adapted this article for the Spring 2015 issue of YES! Magazine. Berry is the author of more than 50 books of poetry, fiction, and essays. He was recently awarded the National Humanities Medal, the Cleanth Brooks Medal for Lifetime Achievement by the Fellowship of Southern Writers, and the Louis Bromfield Society Award. For more than 40 years, he has lived and farmed with his wife, Tanya Berry, in Kentucky. Copyright © 2015 by Wendell Berry, from Our Only World. Reprinted by permission of Counterpoint Press.

The Pope Francis Deserves a Standing Ovation

Dr. Mercola



What do Pope Francis, Neil Young, and German beekeepers have in common? They're all speaking out against genetically engineered crops and the excessive use of toxic pesticides.

Meanwhile, the chemical technology industry is feverishly trying to revamp its image by renaming itself and putting out new spins on words to disguise what they're really all about.

The sad fact is, the chemical industry has to a large degree taken over the food industry, not to mention hijacked the federal regulatory process. In essence, most of the population is being fed by poison experts.

The Grocery Manufacturers Association (GMA), which has been instrumental in keeping Americans in the dark about what's in our food, also admits it has played an integral role in shaping the draconian "DARK Act," which delivers Monsanto everything they've ever wanted on a silver platter while obliterating the democratic process.

On June 18, 2015, Pope Francis' 184-page long Encyclical letter 1, 2 was published, in which he calls for the transformation of lifestyles, politics, agriculture, economics, and business

Pope Francis Calls for Radical Transformations of lifestyles, politics, agriculture, economics and business in general to tackle Environmental Degradation

in general to tackle environmental degradation.

"The violence present in our hearts is also reflected in the symptoms of sickness evident in the soil, in the water, in the air and in all forms of life."

And, while praising scientific advancements, he criticizes the use of novel technologies without adequate forethought, noting that: "our immense technological development has not been accompanied by a development in human responsibility, values and conscience."

To many people's surprise, Pope Francis appears to have a fairly comprehensive grasp of the subject of genetically engineered food and its many inherent hazards, both to the environment and human health.

Far from coming from a strictly religious perspective, he comprehensively addresses the issue

from the point of ecological and economical balance, noting:

"The expansion of these [genetically engineered] crops has the effect of destroying the complex network of ecosystems, diminishing the diversity of production and affecting regional economies, now and in the future.

"In various countries, we see an expansion of oligopolies for the production of cereals and other products needed for their cultivation. This dependency would be aggravated were the production of infertile seeds to be considered; the effect would be to force farmers to purchase them from larger producers.

"Certainly, these issues require constant attention and a concern for their ethical implications. A broad, responsible scientific and social debate needs to take place, one capable of considering all the available information and of calling things by their name.

"Discussions are needed in which all those directly or indirectly affected (farmers, consumers, civil authorities, scientists, seed producers, people living near fumigated fields, and others) can make known their problems and

concerns, and have access to adequate and reliable information in order to make decisions for the common good, present and future.

"This is a complex environmental issue; it calls for a comprehensive approach which would require, at the very least, greater efforts to finance various lines of independent, interdisciplinary research capable of shedding new light on the problem."

[Pronouncements by the Pope are indeed a great shot in the arm for those crusading against all the unsustainable ways of the world. So too are albums by famous musicians says the author]

Neil Young's latest album, *The Monsanto Years*, is all about Monsanto and "exposing the myth of progress," to quote one of his musicians. Young has also made public statements decrying the hijacking of democracy by corporate interests, warning: "These Corporations were originally created to serve us but if we don't appropriately prioritize they will destroy us."

"I choose to speak Truth to this Economic Power," he writes. "I support those bringing these issues to light and those who fight for their rights like Freedom of Choice. But Freedom of Choice is meaningless without knowledge. That's why it's crucial we all get engaged and get informed."

That's why GMO labeling matters. Mothers need to know what they are feeding their children. They need freedom to make educated choices at the market. When the people have voted for labeling, as they have in Vermont, they need our support when they are fighting these corporate interests trying to reverse the laws they have voted for and passed in the democratic process."

Why Are We Being Fed by a War Chemical Company?



"The expansion of these [genetically engineered] crops has the effect of destroying the complex network of ecosystems, diminishing the diversity of production and affecting regional economies, now and in the future."

- Pope Francis, 15, June 2015

Monsanto, a war chemical company that has been sued over toxic pollution multiple times, and been found guilty of lying and covering up evidence of their wrong-doing in virtually every case, is now looking to buy another giant chemical company, move their headquarters overseas to avoid US taxes, change their name, and rename their toxic bug and weed killers into nicer sounding things like "seed and crop protectants."

Why do we accept food from a poison expert? Toxins are rendered largely unnecessary using regenerative practices, which have also been shown to outperform chemical agriculture in terms of yield.

Monsanto's president and chief operating officer Brett Bergemann recently stated that: "We have the challenge of feeding 9.5 billion people by 2050. We need to meet that need in a sustainable way and we need to drive sustainable intensification of agriculture." And yet everything Monsanto specializes in drives us in the polar opposite of regenerative agriculture. If you still believe Monsanto is concerned with feeding billions of people healthy nutritious food, then you simply have yet to objectively and carefully review their scandalous history.

They design and patent seeds that withstand the very herbicides they make and sell. They promised weeds would not develop resistance, but 10 million acres of superweeds stand

witness to that lie. This has led to more Roundup being used to keep up with the weeds. Now crops resistant to even more toxic chemicals are being brought to market. Everything Monsanto has ever done has been centered around toxic chemicals, and now they're trying to purchase the world's largest pesticide producer.

Toxins and health do not go together, and anyone with impartial and rational motivations will quickly realize that Monsanto is not in the health-food business. They're in the poison business, and with the bid to take over Syngenta, it should be crystal clear that Monsanto is not about to change their century-old track record anytime soon, no matter how many new words they invent to confuse you about the use of toxins on your food.



Dr. Mercola finished his family practice residency in 1985 but was trained by the conventional model. Initially, he treated many symptoms with prescription drugs and was actually a paid speaker for the drug companies. But as he began to experience the failures of this model, he embraced natural medicine and over the last thirty years has applied these time tested approaches successfully.

Over 15 years ago he founded Mercola.com to share his experiences with others. He's also written two NY Times bestselling books, and has had frequent appearances on national media including the Dr. Oz show and major news channels.

Mercola, J. "Pope Francis, Neil Young, and 100,000 Beekeepers Take a Stand Against Toxic Agriculture" Retrieved July 1st, 2015, from <http://articles.mercola.com/sites/articles/archive/2015/06/30/beekeepers-genetically-modified-crops-toxic.aspx>



The trail of a disappearing culture

Sunanda Bhat's award-winning documentary, *Have You Seen The Arana?*, is deeply relevant in today's world, as it explores the deep connectedness between man and nature, and the struggle of little-known people to preserve it in the face of many onslaughts. **Shoma A Chatterji** reviews the film.

If one looks at the etymology of "Wayanad," the name given to the twelfth district of Kerala, one realises that it comes from "vayal," meaning "paddy," and "naad," meaning "land." This translates as "land of the paddy fields."

Wayanad, in the picturesque Western Ghats, is unique, culturally, ethnographically and in the diversity of lifestyles because it consists of a large population of aboriginal tribes – the Paniyas, Kurumas, Adiyars, Kurchiyas, Ooralis, Kadans and Kattunaikkans – who own land, as well as the other tribes who toil as labourers. Wayanad accounts for 36 percent of the total adivasi population in the districts of Kerala.

These indigenous tribes possess rich knowledge in conventional rice cultivation, extraction of medicine from the forests in the area, use of the medicinal herbs, roots, branches and plants and so on. This forms the setting of Bhat's *Arana*, which sheds light on how little-known indigenous people are striving to preserve the rich natural features and elements of the environment they live and work in.

Arana won the Golden Conch at the 2014 Mumbai International Film Festival in the above-40 minutes category. The John Abraham Documentary Award also went to the film. The film was lauded for its "extraordinarily compassionate understanding of the harmony between nature and man and the imminent

danger of its destruction. This documentary is remarkable also for its restrained yet humane exposition."

Exploring the relations between man and nature

Bhat first visited Wayanad in 2006 to understand the effects of an ongoing agricultural crisis among landless labour. A period of intense research unfolded stories of exploitation and struggle. As she got more and more involved with her subject, which covered the local tribal communities in different parts of the district, a new picture began to emerge. Bhat began to appreciate an incredibly vibrant landscape that is sustained in spite of rapid mutations in the name of development.

In her own words, "Inspired by P. Sainath's articles on the agricultural crisis in Wayanad, I initially started out by wanting to make a film on the adivasis working in ginger plantations in Karnataka. Those were mainly stories of exploitation and abuse. I realised that I was going to be representing them in the same way as most of mainstream media does, as an exploited and helpless lot. So I started examining the way I was 'looking' at them."

In the course of her research, she met a number of people who knew a lot about the land and were willing to share their knowledge readily. "These were very 'ordinary' people who did not get their due recognition in society.

Why couldn't I make a film on these 'ordinary' people who had such a special relationship with the land? That is when the film fell into place," adds Bhat.

Thus, one finds real stories of courage, determination and focus juxtaposed with the rise in farmer suicides due to poverty, use of chemical fertilisers and rapid loss of cultivable land. The contradictions between the positive and the negative, the real conflict between beauty and ugliness, brings out how little we know about what is happening in other parts of our country.

Interwoven with the lives and tales of these people are the legends and myths that sustain the indigenous people of the region. The Arana is at once a myth that is sustained through ballads and a state of mind among the children of the locale, nurtured through years of storytelling, instilling in them the fear that the Arana is dangerous and one bite can kill you instantly.

No one visualises what the Arana is all about and no one ever will. No one knows whether it is an animal, a human or super-human being or a reptile. It is like a metaphorical, even ideological, question that both dogs and sustains the people of the land. But it lives on in the lives and minds of the people of Wayanad and is brought out beautifully by Bhat in the film.

The pulapattu or "song for the dead" runs like a thread throughout the film, sung in the hope that the souls of the dead will find their way back to their ancestors.

Then there is the story of Ithi and Achan – yet another enduring legend of how the sun gods and moon gods make their forms out of mud and, as they go to the riverbed, come face to face with the terrifying form of Mali (equivalent of Kali), bathed in slush and mud. As Mali shakes that off, the hills and forests are formed and, when she rushes towards the couple, they scream and run.

"The creation myth that weaves itself through contemporary narratives was told to me by friends, right in the beginning. It was an amazing story that not only represented the journey of a tribe through this land but was also a story of life and death. The myth was extremely difficult to bring into the film, both in terms of filming it and weaving it seamlessly into the stories. Often we wondered whether to let go of it, if it was complicating the narratives. But we hung onto it and I believe that it gives the audience a deeper understanding of the issues in the region," says the filmmaker.

The stories within the story

Bhat's approach to her subject was also guided by the strong inspiration that she derives from the words of David McDougall, an ethnographic filmmaker: "Before films become a form of representing, they are a form of looking – with a certain interest, with a certain will. To look carefully requires strength, calmness and affection. The affection cannot be in the abstract, it must be an affection of the senses."

It is this imprint on the senses that makes Arana shocking in its impact as it underscores, much like a repeated punctuation mark in a long story, how the excessive use of chemical fertilisers has killed Nature. Caught in this ambience, there are people who are constantly struggling against the intrusion of modern technology and fertilisers so that they may sustain their original lifestyles.

Raman Cheruvayil is one among them, who belongs to the Kurchya tribe, known for its knowledge of traditional rice cultivation. Along with his wife, Geetha, he collaborates with NGOs to grow and preserve over 30

Arana documents real stories of courage, determination and focus juxtaposed with the rise in farmer suicides due to poverty, use of chemical fertilisers and rapid loss of cultivable land – the contradictions between the positive and the negative, the real conflict between beauty and ugliness. Interwoven with this are the lives and tales of these people – the legends and myths that sustain the indigenous people of the region.



Photo: Suranda Bhatt

N P Jochi is deeply concerned over the disappearance of medicinal plants from the forest consequent to thriving tourism.

varieties of indigenous species of rice. He holds workshops for children on a regular basis, to share his knowledge of traditional farming with them. He lives with his family in Kammana, in Manathavady, Wayanad.

Cheruvayil recently bagged the P.V. Thampy Endowment Award for his work in the field of traditional farming. The camera catches candid shots of Raman with his small grandson, who insists on accompanying him to the fields to root out crabs, because crabs divert the water supply or suck it up, making the land dry.

M.P. Kalan is a moopan or elder belonging to the Adiya tribe. He is one of the few remaining tribals who can sing the pulapattu, normally performed as part of the rituals for the dead. He lives with his son in Thrisseri, Wayanad.

N.P. Jochi, a middle-aged woman with an ever-smiling demeanour, belongs to the Adiya tribe. She is a traditional healer and part of a local initiative that protects and regenerates disappearing medicinal plant species from the evergreen forests of North Wayanad.

"I got interested in herbs and plants when, as a child, I accompanied my father, a healer, to the forests. I have seen the rapid spread of tourism in this region, which has had a very negative impact on the natural habitats of plants and herbs," she says. Along with a local schoolteacher, she has garnered the support of tribal communities in Thirunelli to protect the forests against tourist influx.

Yet another character is George Joseph, a young Syrian Christian from a family that migrated to Wayanad from South Kerala. He earned a lot of money in Saudi Arabia but, when he came back, he invested almost all his earnings

in ginger cultivation in neighbouring Karnataka, expecting huge profits. But the price of ginger declined sharply and he lost his entire investment. He is now looking for a job to go back to Saudi Arabia to make good his loss.

A long journey

Bhat worked on the documentary for around six years, looking for ways to capture and represent the complexity of such people and their habitations. Much of the film rests on the relationships she was able to build with her characters over this period.

Most of the pre-shooting research was done through long bus journeys, which often meant traversing different terrains, from rice fields in the valleys through tea, coffee and rubber plantations along slopes, ending in dense forests on hilltops.

"I tried to lighten the heaviness and the seriousness of my subject by interweaving the bus journeys with the wetness and the dryness of the seasons, with the changing contours of the land and the textures of the faces, so that they blend to form a holistic picture of the people whose story I wished to get across," says the filmmaker.

Bhat has neatly fulfilled her aim of capturing the changing lifestyle, economy and ethnography of Wayanad, as seen through the lives of ordinary people who are doing extraordinary things to sustain the ecological balance between Man and Nature. Their common aim is to sustain the happy marriage between the two through sustainable development.



Dr Shoma A. Chatterji is a noted author, freelance journalist and film scholar. She holds masters degrees in Economics and Education. Dr Chatterji obtained her PhD in History of Indian Cinema from the Netaji Subhas University, Kolkata.

Her areas of specialisation include cinema, gender, television, child rights, human rights, literature and relationships. Dr Chatterji conducts workshops on writing, journalism and film appreciation in Mumbai and Kolkata. She has served on international film and FIPRESCI juries.

Fishy Movements

Curious global imports and exports

All data reflects the 2014-15 year.

Around 90% of America's fish is imported from elsewhere. Strangely, a large proportion of this imported fish is caught in American waters, sent to Asia for processing, and then sent back to the United States.

Data obtained from the United States National Oceanic and Atmospheric Administration.

Map and icons are courtesy of Wikimedia Commons.

← 42,124,479

Salmon

74,390,320 kilo

← 39,028,486

Squid

82,187,140 kilo

← 47,209,471

Pollock

100,314,952 kilo

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Global trade before industrialization only involved the transport of high cost, low volume items such as silk and spices. However, after 1990, staple, low cost, high volume goods such as flowers, fruit, corn, soya and fish, began to crisscross the world, riding on highly subsidized fuel, with no regard for carbon emissions. Roshan Benefo helps us understand this crazy world of global trade through infographics about large volumes of globe-trotting fish.



Labor in Asia is cheaper than in the US, making Asia an attractive option for American seafood companies. In this “great American fish swap,” as it has been termed by Paul Greenberg, author of “American Catch,” fuel is wasted, and large amounts of CO₂ are emitted.

This trade is not limited to the United States - several European countries, including the UK, Netherlands and France also take part in the ‘swapping’ of fish.

Roshan Benefo is a 12th grader at Phillips Academy, Andover, in the United States, and is an editor at his school's newspaper, "The Phillipian." He can be reached at rbenefo@andover.edu.



TOWARDS SUSTAINABILITY

Have you overstepped the Sustainable Consumption Line?

Humanity has collectively crossed the limits necessary for ecological sustainability. **Ashish Kothari** argues for a sustainable consumption line that would ensure individuals and communities do not partake of resources in a way that deprives others or endangers the environment further.

On 1 April 2013, I put out a news item announcing that the Government of India had set a Sustainable Consumption Line, and all those consuming above that line would have action taken against them. Several readers wrote to me asking for more details, some even wanted to write to the Government congratulating it for the bold step. Eventually, of course, people figured out it was a spoof.

But my intention was more than merely using April Fool's Day for some fun. It was a light-hearted attempt at addressing a serious issue. So here's taking the serious element ahead, with a few thoughts meant more to stimulate a dialogue than offer a conclusive blueprint.

Why do we need to limit consumerism?

Collectively, humanity has in many ways already overstepped the ecological limits that the earth places on us. In 2005 the Millennium Ecosystem Assessment found that «60 per cent (15 out of 24) of the ecosystem services examined ... are being degraded or used unsustainably, including fresh water, capture fisheries, air and water purification, and the regulation of regional and local climate, natural hazards, and pests.»

In 2009, a large team of scientists led by Johan Rockström of the Stockholm Resilience Centre concluded that of nine 'planetary boundaries'

"humanity has already transgressed three ... for climate change, rate of biodiversity loss, and changes to the global nitrogen cycle." The Global Footprint Network estimates that we are already on 'planetary overshoot,' consuming what the earth provides 50 per cent faster than can be replenished ... with horrifying implications for both future generations and victims of environmental damage in current generations. Human development is, clearly, unsustainable and unjust.

While the sheer number of people is certainly one factor behind this trend, an equally or perhaps more serious factor is the wasteful consumption pattern common in industrial countries, and also among the rich in the so-called developing countries. Profligate consumerism is trashing the earth. If you've got a car, air conditioner, refrigerator, electrical appliances in your kitchen, a home theatre and stereo system, or exotic food items that have come from half-way across the world, or if you simply use a new disposable plastic bag every time you shop, or take flights across the world (to conferences about saving the world!), chances are you are part of this class that is treating the earth like a giant extraction machine and as big a dump. Like me.

We don't all consume the same

Rich (industrialized or urbanized) countries of the world are today consuming far above their fair share of the earth's resources. Each average citizen in the United Arab Emirates needs over 10 global hectares (gha, or a hectare with a world average ability to produce resources and absorb wastes), each American over seven ... whereas each Indian needs less than



While on one side there is shameless profligacy and waste in consumption, on the other, there are several billion people who do not have enough to consume, suffering deprivations of food, energy, water, shelter, clothing, and other basic needs. This, too, should be a reason for the rich to cut down, because only then will global ecological space be created to enable the poor to enhance their lives; else such enhancement will take us further along the path of ecological suicide and socio-economic conflict.

0.9. According to the Global Footprint Network, the earth can accommodate a per person consumption of 1.8 gha.

This inter-country contrast is mirrored by the inter-class contrast within a country. A back-of-the-envelope calculation that my co-author Aseem Shrivastava and I did for our book *Churning the Earth* (Viking/Penguin 2012), indicated that per capita ecological footprint of the richest one per cent people in India (folks like us owning the products mentioned above) is 17 times that of the poorest 40 per cent. These folks already enjoy well above the global acceptable limit of 1.8 gha.

To make consumption truly sustainable, there is a need for a measure to determine what is sustainable and ways to implement this measure - a Sustainable Consumption Line, which determines whether an individual is living sustainably.

- Growth as violence
- Partly our responsibility too

While on one side there is shameless profligacy and waste in consumption, on the other, there are several billion people who do not have enough to consume, suffering deprivations of food, energy, water, shelter, clothing, and other basic needs. This, too, should be a reason for the rich to cut down, because only then will global ecological space be created to enable the poor to enhance their lives; else such enhancement will take us further along the path of ecological suicide and socio-economic conflict.

Unfortunately, we live in an upside-down world in which the poor and powerless continue to face all kinds of limits to their consumption, while the rich and powerful have a virtual free-for-all. Take for instance, natural resources. In many countries, communities that live inside or adjacent to forests have quotas on the amount of timber, non-timber forest produce, fuel, and other such products they can use. If they happen to fall within a protected area (over 13 per cent of the earth's surface is under such land use), the restrictions are even stricter, and in some cases absolute. This is justified in the name of forest and wildlife conservation.

But is there any such limit on rich (mostly urban or semi-urban) consumers? Their distance from forests and other natural ecosystems

makes their use of natural resources virtually invisible, but it is very real. So for instance there is no limit to how much electricity an urban (or rich rural) family can consume, notwithstanding that it comes from power stations or dams that have had major ecological impacts on forests, wetlands, grasslands or marine areas, and have displaced or dispossessed local communities. There is no limit on the amount or kind of minerals the rich can use, regardless of the fact that mining threatens crucial ecosystems and cultures worldwide.

In India alone, over 100,000 hectares of forest land have been diverted for mining in the last 30 years, and countless rivers and lakes have been polluted beyond repair by mining run-off. There is no limit on how much vehicular fuel the rich can use, for we are collectively blind to the impact this has on areas from where fuel is extracted or the pollution and climate change being caused by vehicular emissions.

Americans and Europeans are of course past masters at this, but parts of the erstwhile poor world are also fast catching up, joining their consumerist big brothers in what can be called the 'Global North.' For instance, Greenpeace India estimates that the richest Indians are already reaching the global average of per capita carbon emissions (of about 5 tonnes per year) and that their emissions are almost double the per capita limit (2.5 tonnes) considered necessary if we want to restrict temperature increase to below two degrees.

Perhaps among the few limits imposed on urban populations is landholding; in India for instance there was a ceiling on how much land a family could own. Increasingly, though, in the post-1991 economic globalisation phase, such ceilings in both cities and villages are being done away with or diluted.

The Sustainable Consumption Line

'Sustainable development' to us certainly has become quite a buzzword. Virtually every agency of the United Nations, every big multilateral and bilateral agency, and most big civil society organizations are involved in discussions regarding the framework that will, in 2015, replace the current

Millennium Development Goals. Sustainability is supposed to be a fulcrum of this framework. One crucial component of this is 'sustainable consumption', but unfortunately, there is very little talk of the need to drastically cut down existing consumption levels of the global North.

To make consumption truly sustainable, there is a need for a measure to determine what is sustainable and ways to implement this measure. Several countries have measures or indicators by which they determine people eligible for social welfare schemes, for example in India we have a Below Poverty Line (BPL). As a counterpart, what is needed now is a Sustainable Consumption Line, which determines whether an individual (or, extrapolated, a family, community or region) is living sustainably. Then those Above Sustainable Consumption Line (ASCL) would be eligible for actions that help or force them to scale down.

Of course, both the conceptualization of the SCL and even more, its implementation, will be highly complex. Full information on what kinds and levels of consumption are sustainable is sketchy, and global averages could be misleading. Any individual or group will have a unique mix of products and services being consumed that will make composite calculations difficult. Assessments will need to include not only how much of what is consumed, but how it was obtained, transported, processed, and so on.

This complexity should however not be an argument making a start; the SCL can be made more and more sophisticated and meaningful over time. At the beginning, some relatively simple aspects can be taken. As examples:

Sustainable energy consumption: Every household of average size is to be allowed only a certain kw per month of electrical power from the grid, at subsidized rate; it can buy more at the full cost incurred to supply it, but again up to a limit beyond which no-one is allowed. Concomitantly, the government and other agencies commit to vigorously promote energy-saving in all devices so the family quota can go a longer way, as also to support energy self-sufficiency at household and community level using decentralised renewable sources.



A garbage sorting centre in Pune. Courtesy: Ashish Kothari

- **Sustainable water:** Every household of average size is allowed only a certain number of litres of water use in a day. To begin with this could be the direct water use, but eventually the 'embedded' water use (i.e. needed to produce the products and services that a household is using) can also be integrated, or dovetailed with the sustainable materials measure.

- **Sustainable transport:** Every household of average size is allowed only one private motorised vehicle, and can use it only occasionally, say once a week; concomitantly there is a commitment by governments and other public agencies to urgently improve public transport, cycle lanes and footpaths, and special facilities for the elderly and disabled, in all settlements. Eventually private motorised vehicles may not be needed at all. Additionally, every individual is entitled to a certain maximum number of trips by air and by train in a year.

- **Sustainable shelter:** Every household of average size is allowed a certain maximum built up area for its dwelling; anything in excess of this already owned or used by the household will be made available for housing the homeless or those with less than average built-up area. Unoccupied houses will be eligible for take-over by the homeless, as is the case in some European countries.

- **Sustainable waste:** Every household of average size can generate only a certain maximum amount of waste in a month; anything in excess has to be recycled, composted,

or otherwise dealt with within its premises or the premises of the community/colony it resides in. For its part, the government commits to eliminating wasteful use of materials in all products (e.g. in packaging), and facilitate household and community-level recycling, composting, and other safe disposal of waste.

... and so on, for the consumption of materials, food, and other products, and for the use of spaces and services (land, roads, other infrastructure). There also has to be some exceptions built in, for instance in the case of travel for essential services like medical professionals, government officials on necessary duty, etc.

Setting and implementing the limits

How would the actual amounts in each of the above be calculated? One option is to calculate what would be a sustainable ecological footprint per person, building in the impacts of the use of various resources and services and then working out the per capita that could be allowed if the total footprint was to be restricted to the relevant country's or region's ecological and social capacity. This is of course simpler said than actually worked out, but it is possible to get a rough idea, and keep refining it over the years.

To make consumption truly sustainable, there is a need for a measure to determine what is sustainable and ways to implement this measure - a Sustainable Consumption Line, which determines whether an individual is living sustainably.

There is already an average worked out by the Global Footprint Network of 1.8 global hectares, as the per-person upper limit of what the earth can provide. This does not include freshwater use and planetary space needed for other species, so the figure is likely to be smaller. Also this would need to be further nuanced for specific ecological and cultural conditions. But it is a reasonable starting point to build on.

But if setting limits is complex, even harder will be their actual implementation. We need social and legal measures that

- guide and facilitate the transformation towards sustainability of consumption patterns,
- impose strong disincentives and penalties for those seriously breaching the ASCL,
- provide incentives for those who pro-actively and voluntarily comply, and
- empower communities from whom resources are being snatched away to feed the consumerism of the rich.

The last point may well be the most important factor. The recent refusal by 12 gram sabhas in Odisha to allow Vedanta corporation to mine bauxite from their hills and forest lands, and similar actions by other communities in many parts of the world, have shown the potential of local, direct democracy. The more such resistance takes place, and the more it is empowered by policies such as the requirement of free prior informed consent, the more difficult it will be for the rich to grab what they want.

A potentially strong measure to achieve consumption limits would be to provide upper limits to incomes and wealth. Some civil society organizations do this voluntarily, imposing both an upper limit of salary or honorarium because it is considered profligate for someone to earn more, and a minimum ratio between and maximum and minimum pay to reduce

the levels of inequity. Governments too set limits, though these are based more on what is affordable rather than on considerations like personal profligacy and equity. The private sector and the world of virtual incomes have hardly any such limits, as is clear from the obscenely high incomes or returns that CEOs and investors around the world take home.

Inevitably this also calls for questioning the very fundamentals of today's model of 'development' and growth, and the political economy of both capitalism and state socialism. These are all based on ignoring the ecological limits that the earth places on us, not to mention the serious inequalities of power and wealth such models inevitably result in. Arguments that technology will provide ways out of the limits the environment places on us have repeatedly proved to be false, though most certainly, better technologies that reduce materials and energy consumption are part of the answer. But this is not the place to go further into this complex subject, it is only necessary to flag it here to place the ASCL in a macro-context.

Of utmost importance is reining in the advertising industry, and other ways companies push their products, including the use of mass media, movies, celebrities, fashion shows, professionals, and so on. Civil society naming and shaming of companies that use unethical means of various kinds to create consumerist demand, in the manner done by forums like Adbusters for instance, is one method.

Education and awareness regarding the impact of a throw-away culture, and providing a sense that there is nothing 'uncool' about using a product for its full lifetime, rather than buying the latest model simply because it is available, are other strategies.

Government regulation will also be necessary, at least till social pressure and monitoring are adequate. Prohibitive taxation on luxury and wasteful items, as well as on processes that make products appear redundant even though they are perfectly functional would also be required. As a part of the re-structuring and re-invention of education and learning geared to create responsible adults, curricula and materials used have to be made sensitive to these issues.

A potentially strong measure to achieve consumption limits would be to provide upper limits to incomes and wealth. Some civil society organizations do this voluntarily, imposing both an upper limit of salary or honorarium because it is considered profligate for someone to earn more, and a minimum ratio between the maximum and minimum pay to reduce the levels of inequity.

Should some form of 'consumption trading' be allowed, in which individuals and families can use the quota of those who voluntarily agree to use less than what they are entitled to, like carbon trading? I would not recommend this, considering the widespread and systematic abuse of the carbon trading mechanisms (or related ones like clean development mechanism). Market-based measures have a way of being hijacked and distorted by the powerful.

Unfair and Infeasible?

Most readers will think that these ideas are downright unfair, and impossible to implement. There will be the inevitable outcry regarding the supposed infringement of private or personal freedoms, and the restrictions on what are claimed to be 'deserved' remuneration and compensation. But keep in mind that such freedoms cannot be a license for trashing the earth, or taking up more than one's fair share of the earth's resources thereby depriving someone (or something) else.

In so far as over-consumption leaves other people impoverished, or results in ecological catastrophes that leave others homeless or dead, or snatches away the space of other species to survive, it is akin to theft or murder. Consider the movement against smoking in public, so successful in so many countries; if over-consumption of any product is socially harmful, why should it be tolerated in the name of personal freedom?

For forest-dwellers in India, it would seem equally unfair that they can take out firewood only as much as they can lift on the head, when they could be cutting much more to sell. Those of us who make environmental policy (forest-dwellers rarely do!) think it is justified to put this limit, because the forest needs to be protected from over-harvesting. But then why not the same for our consumption, which has an equally if not worse impact, albeit often in far-away ecosystems invisible to us?

As for being impossible to

implement, that's a function of governance, and of course also of convincing people that this is for their (our) own good... or at least the good of our children. Ultimately, more than laws and regulations, it will be awareness and concern about our collective future, social compacts and customs, and peer pressure, that will make the ASCL system work.

A culture of 'enoughness' rather than 'more and more,' the celebration of voluntary simplicity (not to be equated with poverty) rather than profligacy, making durable and long-lasting products acceptable again rather than a 'throw-away culture,' a respect for other humans and the rest of nature such that we continuously, almost subconsciously assess the impacts of our actions on them.... these and other aspects need to be the basis of a powerful culture and psyche underlying our lives and lifestyles. When that happens, we will be looking at our neighbour with envy if they are BSCL (yes, you guessed it, Below Sustainable Consumption Line) while we are still that little bit profligate.



Ashish Kothari is with Kalpavriksh, an environmental action group based in Pune. He is the co-author of the book 'Churning the Earth: The Making of Global India' (Viking/Penguin books).

He has been a member of people's movements against destructive development projects including the Narmada dams. He coordinated the Technical and Policy Core Group to formulate India's National Biodiversity Strategy and Action Plan.

He is also a member of the Panel of Advisors of Bhoomi College.

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Coming of Age: The Organic Community of India

Bharat Mansata



The largest organic farming confluence in the world – over 2,500 participants from 22 states of India – gathered at the National Organic Convention in Chandigarh from Feb 28 to March 2, 2015. The flood of registrations had to be stopped a month in advance. Such zeal surely signals the growing recognition of agro-ecology as a burning imperative of our times, reflecting the Convention aim to ‘Mainstream Organic Farming!’

At the concluding session, Shri Prakash Singh Badal, Chief Minister of the frontline state of India’s ‘Green Revolution’, ironically hailed organic agriculture as “the need of the hour,” marking the full turn of a circle. He mourned the heavy burden of chemical poisons that the land, farmers and people of Punjab have had to bear, admitting sadly that “Mother Earth, Father Water, and Guru Air” have all been desecrated. Toxic pesticides have devastated the health of Punjab. “You people,” said Badal – addressing a packed auditorium of organic farmers, seed savers, ecologists, scientists and activists – “are the heroes of this new struggle to save the nation!”

The CM called for making Punjab the leading organic farming state of India, with diversification in place of present extensive monocultures. Announcing a 50% state subsidy for rearing indigenous cattle breeds, he also offered to provide retail/distribution shops and facilities for selling organic produce. Declaring the setting up of an Organic Farming Board, he promised panchayati land to set up a demonstration organic farm in every block of the State.

Earlier, at the Convention, Shri Manohar Lal Khattar, Chief Minister of Haryana, accompanied by his Agriculture Minister, pledged state

support to turn at least 10% of its total cultivable land to organic farming. Smt Maneka Gandhi, Union Minister of Women and Child Welfare, rang out a grim warning against the highly dangerous neo-nicotinoid pesticides (used for treating Bt Cotton seeds) that were slaughtering the pollinating creatures like bees, an estimated 70% of which have already been wiped out. This would severely harm agriculture, unless banned, as in the European Union. “The owners of Bt cotton lied to us,” declared the Minister. “They told us that it doesn’t require pesticides... but now, we find that Bt cotton cannot grow without the most dangerous pesticides in the world.”

A few years ago, the beacon IAASTD World Agriculture Report bluntly stated: “Business as usual is not an option!” Prepared over 4 years by 400 international agricultural scientists/experts and 1,000 multi-disciplinary reviewers, this Report was endorsed by 58 nations, including India, as also representatives of FAO, World Bank, World Health Organization, UNEP, UNDP. Its recommendations stressed the urgency to adopt bio-diverse agro-ecological farming, and to support small family farms – to overcome the many serious problems confronting world agriculture. GM crops, it added, are not an answer to hunger, poverty

and climate change, or to ecological, energy and economic challenges.

A riot of colours, costumes, cultures and cuisines greeted visitors at the ‘Nature and Kisan Mela’ and its ‘Organic Food Festival’ and ‘Biodiversity Festival’ that continued alongside the deliberations of the National Organic Convention. The Organic Food Festival, with ethnic organic fare from several Indian states, was a big hit. The Biodiversity Festival presented a dazzling display of over 2,000 distinct seed varieties of crops, brought by 270 seed conservator-farmers from all over India. Half a dozen new publications were released. Several book stalls, film screenings and cultural programmes of song, music and dance enhanced the charm of the memorable Organic Mela, dampened a bit midway by rain and wind.

The Convention was jointly organized by the Organic Farming Association of India (OFAI), Alliance for Sustainable and Holistic Agriculture (ASHA), and Kheti Virasat Mission, in collaboration with the local host organization, the National Institute of Technical Teachers Training and Research (NITTTR). The deliberations were bilingual, with communications in Hindi translated into English for the participants from the south, and vice versa. Parallel translations into other

regional languages – for those who understood neither Hindi nor English – were self-organised by the various state delegations.

The National Organic Convention simultaneously hosted meetings of the Bharat Beej Swaraj Manch (India Seed Sovereignty Alliance). This pledged to regenerate and widely share the enormously rich diversity of traditional crops and crop varieties in India as a collective open-source heritage belonging to all, free of any private/corporate Intellectual Property Rights. The Alliance also sought to reclaim the many thousands of native crop varieties collected from farmers all over India by national and international germplasm banks. It was suggested that every farmer or family should adopt at least one crop variety for decentralized on-farm seed conservation and open-source propagation.

In sharp contrast, Mr Swapan Dutta, Dy Director General, ICAR, declared a few years ago in an interview to the Wall Street Journal, that India had over 4,00,000 varieties of plant germplasm. These included crops with unique features like nutritional/medicinal qualities, drought/flood tolerance, salinity tolerance, and pest resistance, all of which it was willing to offer corporates for a small share of profits!

GM crops were categorically rejected as an unnecessary technology with numerous potential hazards. Warnings were given of the serious contamination risk by recently sanctioned open field trials of GM crops – disregarding the recommendations of several Government, Parliament and Supreme Court appointed Committees.

Also part of the National Organic Convention was a scientific conference organized by the Society of Agro-Ecology, and the Centre for Sustainable Agriculture. This saw scientists from prime research institutions discussing with farmers and farmer-scientists their observations and research on soil health, plant nutrition, plant protection,

What we need to ‘Make in India’ is an agro-ecological paradise that gratifies all basic biological, aesthetic and spiritual needs, not a global factory for a growing array of non-essential, resource-hogging, pollution-spewing industrial and consumerist goods.

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water management, and especially indigenous livestock development.

With so many outstanding farmers around, and multiple parallel sessions on offer, participants felt they could barely whet their appetite. But they carried back a collective energy and renewed confidence, knowing they had a growing fellow community of organic pilgrims and path-finders they could call upon when needed.

Missing the vibrant presence of veterans like Nammalwar, who passed away last year, and of ailing Bhaskar Save, who completed 93 years in January 2015, the 5th National Biennial Organic Convention paid tribute to these towering, dedicated stalwarts, noting that they have inspired innumerable others on the natural, organic path. Tribute was also paid to Sir Albert Howard, considered ‘the father of sustainable agriculture’ in the west, who confessed more than a century ago that he learnt it all from humble peasants in India.

In 2017, the international community will return to draw fresh inspiration from India. It was announced that the ‘International Organic Farming Convention’ organized by the ‘International Federation of Organic Agriculture Movements’ (IFOAM) will be held that year in India.

The final 16 point declaration from the convention pledged to safeguard and regenerate our soil, water, forests, biodiversity and seed sovereignty; and to work towards mainstreaming ecological farming in the country as “the only way forward for meeting the nutritional, livelihood, socio-cultural and spiritual needs of our people, including those of future generations.”

The Convention further declared that land under food cultivation must not be diverted for other purposes through forced land acquisition.

PM Narendra Modi called for the North-eastern and hilly states to become an organic hub. But ‘achhe din’ (good organic days) must include all of India! What we need to ‘Make in India’ is an agro-ecological paradise that gratifies all basic biological, aesthetic and spiritual needs, not a global factory for a growing array of non-essential, resource-hogging, pollution-spewing industrial and consumerist goods.

The overarching eco-spiritual tradition of this land is the unity of Vasudhaiva Kutumbakam – the earth is one family in one home. Mother Earth, the only known cosmic body with a living biosphere, must not now become a spew-chamber of chemical-industrial toxins, her inner vitals vandalized for short-sighted economic growth. The organic community is waking to the enormous challenges ahead.



Bharat Mansata is an author- editor-activist and a co-founder of ‘Earthcare Books’ (Kolkata), involved in environmental and sustainability issues for over two decades. He most recently authored ‘The Great Agricultural Challenge’ and ‘Organic Revolution’. He writes in many newspapers like TOI and has authored many books. He has also developed a food forest named Vanvaadi near Mumbai.

The Part and the Whole

Jane Sahi



Photo Courtesy: silvepura.blogspot.in

Kabir navigating faiths - Painting by Jyoti Sahi

The person is distinct as a separate individual, but the strength and depth of his individuality is determined by his capacity for non-possessive relationships and detached action.

Gandhi believed that all human beings are significant parts of a whole. He compared this underlying unity to the drops of water that make an ocean possible; or the single strands of thread that spun together make woven cloth; or the separated organs that work together to enable a body to function. However, any analogy is finally inadequate to describe this balance of the part to the whole. Gandhi, writing from his own experience, feels himself to be “part and parcel of the whole”.

The person is distinct as a separate individual, but the strength and depth of his individuality is determined by his capacity for non-possessive

relationships and detached action. Gandhi writes that when human nature “acts equally towards all and in all circumstances, it approaches the Divine”. For Gandhi God is realized through a growing recognition that “I cannot find Him apart from the rest of Humanity.”

Writing of the inter-dependence of the part to the whole and the individual to the society Gandhi said, “Willing submission to social restraint for the sake of the well-being of the whole society enriches both the individual and the society of which one is a member.”

Gandhi’s optimism enabled him to say that each person is “born to realize

the God who dwells in us.” And that, collectively, the attraction to goodness is stronger than the inclination to evil. He wrote : “I believe that the sum total of the energy of mankind is not to bring us down, but to lift us up.” The optimism that Gandhi trusted began necessarily with a belief in himself. He could both speak of himself as “a vivisector of my failings” and yet say: “I am an irrepressible optimist because I believe in myself. That sounds very arrogant, doesn’t it? But I say it from the depth of my humility. I believe in the supreme power of God. I believe in Truth, and therefore I have no doubt in the future of this country or the future of humanity.”

Gandhi makes no claim for uniqueness, or that he is a person with prophetic powers. On the contrary, he states that realization is equally possible for all: "Atman is the same in every one of us. All souls possess equal potentialities; only some have developed their powers, while others have them in a dormant condition."

Moral Autonomy

Gandhi did not believe that the goodness of man was grounded in an instinctive sympathy, but rather in his potential for moral autonomy. Gandhi firmly rejected the prevalent determinist view of the world. Such a mechanistic perspective tends to reduce the individual person to powerlessness. It is a theory that sees the person moulded from within, or from without. While expressing his beliefs in an essential goodness, Gandhi recognizes, at the same time, the power of outer structures to distort that essence.

"You say, you Europeans, that man is born without being good or bad, and that it is the place, the institutions, and a dozen other factors which determine the road he is going to follow. I affirm to the contrary, that man is always good and it is only bad institutions that turn him from the straight road."

This optimism is not simplistic or naive, in the sense that Gandhi never imagines that it is sufficient to remove outer constraints in order that human goodness flowers. He stresses the need to grow into freedom and to acquire the capacity to exercise autonomy.

The potential for goodness is hidden like the undeveloped skills of a craftsman, mathematician or athlete that may lie latent within a child. Growth is only sometimes possible

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through struggle and effort. Gandhi acknowledges the constraints that emerge from a particular psychological make-up and temperament.

"All men are imperfect, and when imperfection is observed in someone in a larger measure than in others people are apt to blame him. But this is not fair. Man can change his temperament, can

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control, but cannot eradicate it. God has not given him so much liberty. If the leopard can change his spots, then only can man modify the peculiarities of his spiritual constitution."

Elsewhere Gandhi writes that "the downward course" is attractive because it is presented in "a beautiful garb". He does not under-estimate the conflict that is involved but he writes that the person is capable of shifting beyond a life ruled by habit to live by "the exercise of the will". Gandhi speaks of the seeming contradiction of the Divine Will that is responsible for the growth and movement of every blade of grass and the human capacity for free will. He recognizes the human predicament of being at the same time "less than a passenger on a crowded deck" and a person who is "the maker of his own destiny in the sense that he has freedom of choice in the manner in which he uses that freedom." Gandhi cautions that free will is qualitatively different from controlling the results of one's actions which are clearly beyond our means. He concluded, "We cannot command results, we can only strive."

While Gandhi believed in the human potential for freedom he also admitted the force of external structures : "..... in spite of the greatest effort to be detached no man can altogether undo the effect of his environment and

upbringing." Yet he does believe that the person is capable of self-rule to a significant degree and is "superior to the system he propounds" and the inertia of habit. Gandhi's incisive analysis of economic, social and political forces that diminish the person's autonomy and threaten life itself reveal that he in no way minimized the extent of violence and injustice but he could still claim that "It is man's privilege to overcome adverse circumstances."

Gandhi does not suggest that there is anything magical or miraculous to make the way easier or less challenging. In fact he emphasized the unpredictable nature of an unfathomable God who often "dashes the cup from our lips and under cover of free will leaves us a margin so wholly inadequate as to provide only mirth for himself at our expense."

The clarity of Truth is accessible to each one but cannot be absolutized. Gandhi writes that "the claim to infallibility would always be a most dangerous claim to make." While Gandhi is confident that we have the means to discern right action for ourselves he excludes the use of violence to impose it on others as human understanding is always and inevitably limited:

"Truth resides in every human heart and one has to search for it there and to be guided by truth as one sees it But no one has a right to coerce others to act according to his own view of truth. "



Jane Sahi has worked in Education for 38 years. Inspired deeply by Gandhi, in 1975 she started Sita School, in Silvepura, Bengaluru, an alternative school that emphasises art.

She has conducted numerous workshops on language teaching, written a series of books on teaching everyday English to rural children and been actively involved in the Alternative School Network for almost two decades. She is on the visiting faculty of the Tata Institute of Social Sciences, Mumbai and has worked on peace studies in curricula designed by the National Council of Educational Research & Training.

HOLISTIC SCIENCE

DARWIN REVISIONED

Brian Goodwin discusses the necessity of transforming Darwinian evolution into a liberating vision for the 21st century.

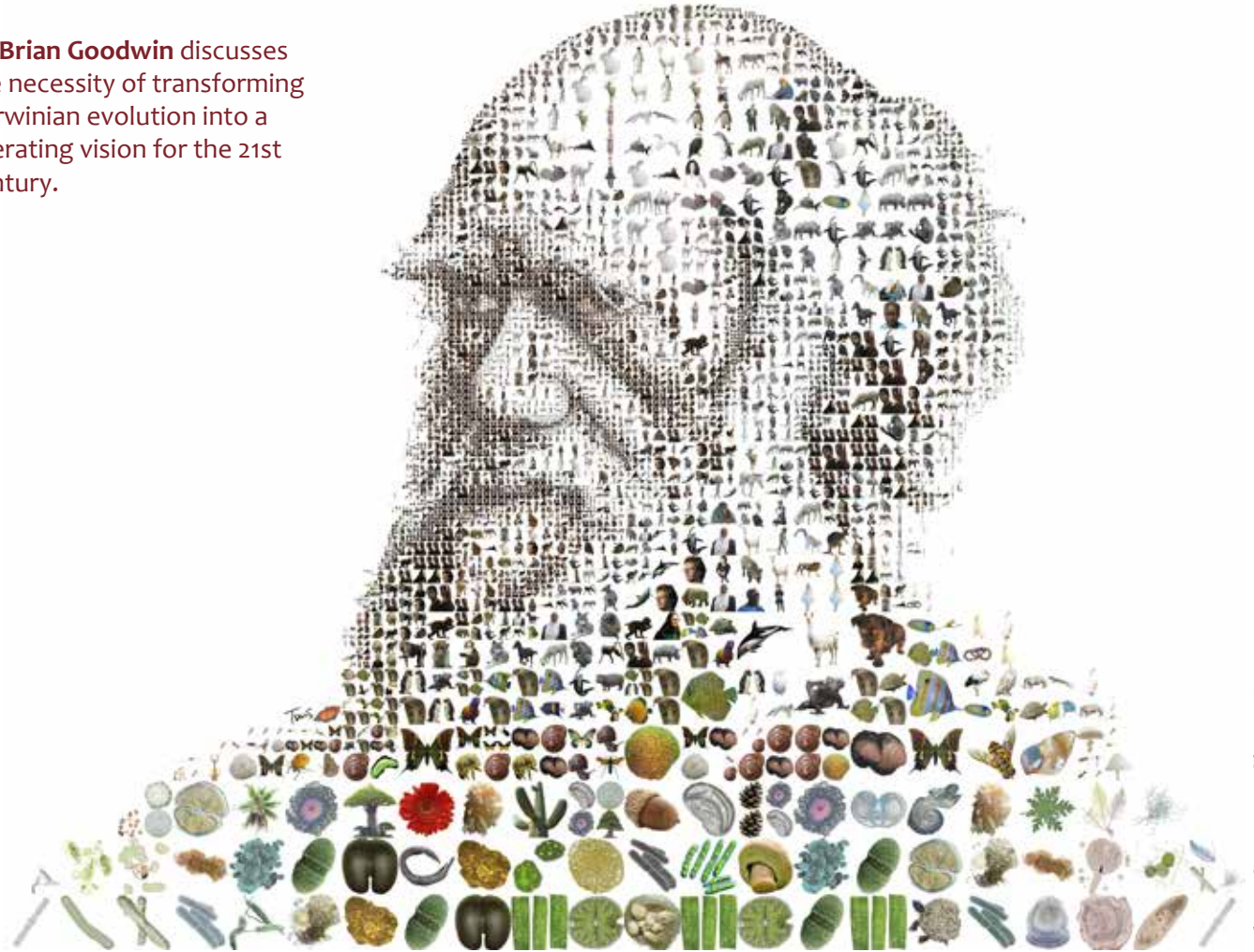


Photo Courtesy: Charis Tsevis

WHAT CHARLES DARWIN offered his contemporaries in 1859 with *The Origin of Species* was a view of evolution that was free of superstition and belief in a supernatural creator. His explanation of the emergence of the stunning diversity of species on Earth, through inherited variability in populations and competition among individuals leading to selection of superior variants, was regarded as an expression of natural law and the intrinsically creative power of the natural world.

Enlightened thinkers of the time experienced this to be powerfully liberating from dogma and ideology, refreshingly based on reliable evidence that came from detailed observation of species and their historical

relationships. The theory was seen to be firmly based on scientific facts, and its many implications about human relations and society were considered to be reliably based on evidence.

We have now had 150 years to reflect on the origins of Darwin's insights and their influence on science and society. What I suggest is that some of the assumptions on which his ideas about evolution are founded have now become new superstitions and dogmas that are not enlightening, but enslaving and limiting. Science has moved on significantly since 1859 in recognising how theories reflect their historical context, and need to be continually re-evaluated – and Darwin's ideas are no exception. It is time to decide what is valuable in his theory and how it needs

to be embedded in a broader vision that is liberating, not enslaving.

First, the good parts:

1. Nature is intrinsically creative and does not depend upon a separate divine being to generate the beautiful and varied range of life forms that have emerged during evolution.
2. Ecosystems are integrated wholes in which the subtle interactions between all the different species express a robust and resilient capacity for adaptation to changing circumstances.
3. There is a historical continuity of the living process throughout evolution that is based on inheritance of stable generative processes in organisms from one generation to the next.

The parts that need changing:

1. Evolution expresses progress that depends upon the competitive elimination of those species that are less successful in the struggle for existence.

2. This struggle arises from inevitable conditions of scarcity of food and suitable habitat for reproduction.

3. The separation of biological evolution from the physical evolution of the Earth.

THE FIRST TWO parts of Darwin's vision that need changing came from his understanding of cultural evolution and the progress that he believed depended on market capitalism as he saw it operating in Victorian England. This was based on economic principles defined by Adam Smith that assumed scarcity of goods among humans and competition for scarce resources. This was the foundation of the economic system of the British Empire, and Darwin believed that it was the basis of civilised progress in humans. Since he regarded human evolution as continuous with biological evolution, he put Nature and culture together in being shaped by natural selection through competition.

However, we now know that Nature works rather differently from this. Major steps in biological and social evolution arise as much if not more through co-operation, sharing among individuals, and symbiosis, as Lynn Margulis and Jane Goodall have persuasively shown. Furthermore, Nature is abundant in providing resources for living beings when they behave sensibly and do not destroy the ecosystems on which their lives depend. The paradox here is that the economic system that we continue to use is based on destructive and wasteful principles, but it is regarded as virtually a law of Nature. This and the economic principle of continuous growth are now superstitions that we need to escape from or they will literally destroy us through their inherently destructive properties.

The third aspect of Darwin's theory that was wrong has now been corrected through James Lovelock's Gaia Theory, the living Earth that joins together evolution of biological species with the evolution of the whole Earth as a single dynamic entity. It is this that is giving us insight into just how destructive our economic behaviour is, with the

Quantities tell us about the properties of the parts; qualities tell us about the condition of the whole. They cannot be separated from our study of Nature without losing something essential. By eliminating qualities such as beauty, authenticity, happiness and love from the study of Nature and our relationship to it we have created a discipline that is very useful for technology, control and prediction but extremely bad at assessing the condition of complex wholes such as ecosystems, economies, societies, and their relationships.

opportunity of doing something about it by escaping from deadly economic superstitions that enslave most of the human world in debt and poverty. If we simply learn how Nature really manages the living Earth as an evolving whole, then we can escape from an outdated economy into freedom and abundance.

HOWEVER, THERE IS one more essential feature that needs to be added to transform Darwinian evolution into a liberating vision for the 21st century. Darwin accepted that science was about observation, measurement and quantities, assuming that qualities such as health, beauty and integrity were not part of the scientist's conceptual toolkit. This distinction is based on the separation of the so-called subjective realm of human experience from 'objective' study. Yet doctors recognise pain as real, and they evaluate health as much by assessing complexion, tone of voice, posture and general behaviour as by measuring blood pressure, blood cell counts, height and weight.

Quantities tell us about the properties of the parts; qualities tell us about the condition of the whole. They cannot be separated from our study of Nature without losing something essential. By eliminating qualities such as beauty, authenticity, happiness and love from the study of Nature and our relationship to it we have created a discipline that is very useful for technology, control and prediction but extremely bad at assessing the condition of complex wholes such as ecosystems, economies, societies, and their relationships.

What we need is a science of qualities and of quantities, in order to study both wholes and parts and their interdependence. This is holistic science. One of the people who developed a holistic view of science in the late 18th and early 19th centuries was Johann Wolfgang von Goethe, the great German poet, statesman and scientist. His vision of science was an integration of different ways of knowing that give us both quantities and analysis, as in conventional science, and qualities, which allow us to perceive wholeness and integration.

A science of qualities gives us an aesthetic and an ethical science that complements and completes our science of prediction and control. The result is a way of knowing the world that restores meaning in right relationship with the other members of our planetary society, and heals our fragmented culture to restore health and wellbeing to all.

So let us honour Darwin for his insights into the intrinsic creativity and unity of Nature, but recognise that his ideas were limited and need to be embedded in the newly emerging broader vision of holistic meaning, aesthetic expression and responsible participation.



The late **Brian Goodwin** taught on the MSc in Holistic Science at Schumacher College in Devon, UK. He has written a number of books, including *Nature's Due: Healing Our Fragmented Culture* (2007).

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Balcony BIRDING

Garima Bhatia



The best place to start birding is your own neighbourhood – a park or playground, or if you are lucky, the comfort of your own home, says Garima Bhatia.

One of the attractions of birding is the fact that birds (at least the common ones) are everywhere and a birder can pursue her hobby practically anywhere on earth. Of course, the rare species are usually found in remote areas, far from crowded cities, and to get to them, photographers undertake difficult treks, carrying kilos of camera equipment, donating considerable amounts of blood to leeches in dense forests and wading through waist-deep slush for that perfect picture.

However, as a beginner, the best place to start birding is your own neighbourhood – a park or playground that you frequent, or if you are lucky, the comfort of your own home. I am fortunate that I had a large seventh-floor balcony that overlooked an abandoned factory overgrown with lovely trees, right in the middle of the city: it was perhaps one of the reasons for my renewed interest in birding, after moving to Bangalore.

Observing the birds from my balcony is a most relaxing way to start my morning. I don't often spend a long time birding (I do need to get to work at a reasonable hour!) but sometimes sneak moments of birding in between the newspaper and the shower. If I hear an unfamiliar bird call, I grab my binocs and rush out. Last winter was glorious: I was woken up by the call of the paradise flycatcher practically every morning!

In 2007, I participated in a programme called MigrantWatch, the first citizen science initiative of its kind in India. Its goal was to track the movement of selected migratory bird species by asking volunteers throughout India to report their sightings. I learnt a lot from it because I signed up to keep daily notes from my balcony. I started noticing birds I hadn't seen before, the arrival of the migrants for the winter and their departure in the spring. Other seasonal variations, such as breeding times of the resident species, also started making sense. At certain times of the year, some birds were very vocal; and completely silent, at other times. I signed up to keep track of the greenish warbler. I had only recently learnt to identify this bird, and quickly learnt about its distinguishing features and call from the MigrantWatch Web site.



I was delighted to find that the warbler was a winter resident in the trees around my house, and in the process also discovered several other migrant species which were regular visitors – the black-naped orioles, ashy drongos and chestnut-tailed starlings. I once saw a brown shrike and even a verditer flycatcher! The summer/monsoon residents, too, are numerous – I routinely see purple and purple-rumped sunbirds, jungle mynas, laughing doves and spotted doves, screeching groups of rose-ringed parakeets, greater coucals and Asian koels. And the “kutroo-kutroo” of the white-cheeked barbet adds music to our surroundings through the day.

There is a beautiful poem by Tagore (for the trivia lovers – the poem was penned by Tagore in Satyajit Ray’s autograph book) that captures this beauty-in-the-backyard phenomenon:

“Bohu din dhore, bohu kroshe dure

Bohu byay kori, bohu desh ghure

Dekhite giyeche porbotomala

Dekhite giyeche shindhu

Dekha hoye nahi chokkhu meliya

Ghar hote shudhu dui pa pheliye

Ekti dhaaner shisher opor

Ekti shishir bindu”

Here’s a translation I like [adapted from <http://pronounce.blogspot.com/2006/09/glistening-drop-of-dew.html>]:

I travelled miles for many a year

I spent a lot in lands afar

I’ve gone to see the mountains

The oceans I’ve been to view

But I haven’t seen with these eyes

Just two steps from my home

On a sheaf of paddy grain

A glistening drop of dew

Yet as I type this, I can hear woodcutters chopping away at this bird paradise across from my balcony. They have been at it from yesterday, while I was away at Nandi Hills birding. This morning I noticed that they had wiped clean half the compound, and in a panic called some friends and got in touch with Hasiru Usiru [a network of individuals and organisations working to protect public spaces, the commons and urban greens in and around Bengaluru], to find out what to do. The volunteers were fantastic with their advice, promptness and concern. The chopping has stopped temporarily, thanks to the commotion created, but I fear that the powers-that-be have given their tacit approval to this mass murder. There is sadness in my heart and moisture in my eyes as I contemplate the harsh reality that I may no longer wake up to the paradise flycatcher or record the arrival of the black-naped oriole in winter. The juggernaut of “development” rolls on.

I don’t often spend a long time birding, but sometimes sneak moments in between the newspaper and the shower. In 2007, I participated in Migrant Watch, kept daily notes from my balcony and started noticing birds I hadn’t seen before. There can be much beauty in the backyard.



Garima Bhatia: A chemical engineer by training and a nature-lover by passion, Garima, after working for 10 years in the automotive industry, decided to shift gears and fully indulge her interest, birdwatching. She is also a bird photographer, an occasional writer and a volunteer for various social/environmental causes.

Garima, in June 2014, worked on a programme on birds and birdwatching for children. She feels that an early connection with Nature goes a long way towards making children responsible custodians of our planet.

The Big Fat Indian Wedding

WITH A SLIGHT TWIST



Photo Courtesy: pixelbay.com

When the wedding bells rang for **Soumya Suresh**, she decided on low wastage and opulence. But then came the uphill journey of convincing the parents. And there was barely any information online to support her beliefs. So Soumya went ahead with her limited knowledge and did little things to stay socially and environmentally conscious.

There are many eco-friendly options to celebrate the special events of one's life.



From the moment I decided on my life partner, I was plagued (as commonly happens) with the idea of why I should not have a perfect, "Big Fat Indian Wedding." Having attended many of those over the past few years, I couldn't help but ask myself "Why? Why this opulence? Why this degree of wastage? Is a celebration on such a large scale justified? Are there other ways to celebrate?"

Let's face it. We live in a country that has a significant percentage of its population living below the poverty line. And yet the wedding industry is one of the most recession-proof. It's constantly on the 'up' trend, with each wedding getting "bigger and better" than the previous one!

Thinking back, I tried to put down the varied experiences that triggered this train of thought in me, whether it was experiencing rural life at the Barefoot College in Rajasthan (where socio-economic disparities and urban-rural divide

hit me) or the lives of the students I taught for two years in a low-income school, as part of Teach for India; or walking along Mumbai's Marine Drive, watching the remnants of grand weddings strewn about and witnessing, just next to them, homeless families rummaging through the leftovers to salvage what they could for themselves.

So, when the wedding bells started to ring for me, I decided to have a wedding that was low on wastage and opulence. But, of course, then came the uphill journey of convincing parents who had their own ideas of how their daughter's wedding should be. I'll be honest with you: it wasn't easy. I barely found information online to support my belief; in fact, most of what I saw were ideas on how to make my wedding bigger and fatter. So I decided to go ahead with my own limited knowledge and do little things to stay socially and environmentally conscious.

I looked at my engagement ring, the invitation cards, clothes purchases, flowers, food, plastics use, wedding favours and gifts. If each of us did little things for our Earth and its people, all of us could together create a much better world.

Although I haven't managed to follow through on all my ideas, here are some aspects I did manage to:

Engagement ring

Most of my friends said, "It has to be a solitaire!" But what struck me was, "Why?!" Much to the surprise (and probably relief!) of my fiancé, I decided to set a budget for the ring. Also, buying into advertising that equates love for your fiancé with the size of a diamond was not something I wanted. I had read an article about the marketing strategy of De Beers, which had talked about "diamonds are forever" being a marketing gimmick and the monopoly De Beers had in this space. It left me amazed because, till then, even I had bought into the "diamonds are forever" belief. You can read the article and catch a funny take on diamond rings by following these links: <https://www.youtube.com/watch?v=N5kWu1ifBGU> and <http://www.exposingtruth.com/diamond-engagement-ring-greatest-marketing-scam-history/>

e-invites

Instead of wasting reams of paper on sending out invites to numerous friends and relatives, I decided to reduce the numbers of cards printed and send out e-invites to those who stayed far away or wouldn't be attending. (In hindsight, given the increased usage of smartphones and the Internet, I could probably have stuck to sending out e-invites to everyone!)

Clothes

A wedding, especially for the bride, involves a complete wardrobe change. I tried minimising that. In fact, it was also a great opportunity for me to let go of the clothes I knew I would never wear, including those that would probably never fit me again. After keeping a few aside for my domestic help and her children, I gave away the remaining to an NGO that provides clothes and other necessities to those who most need them.

Flowers

I remember the innumerable occasions I've walked by kalyana mandapas (wedding-cum-reception halls) after the event, only to see loads of flowers strewn all over, contributing to the garbage, tons of which we generate, anyway. After many long conversations with my parents and the decorator, we managed to use cloth, lights and artificial flowers (which are reusable) with minimal flowers, for some functions. Additionally, my mother, whose love of flowers tends to be a little on the excessive side, came up with the idea of using some basic decoration, adding a few fresh flowers each time, as the function progressed, so that, although the décor looked different with each function, less flowers were used.

Food

Food happens to play a major role at every Indian

wedding. But hunger is a huge social concern in India; and what irks me is the amount of wastage post-event. I would have loved to reduce the variety in the food but it was non-negotiable with my parents. I was lucky, though, to get a caterer who ties up with an old-age home and send most of the excess food there after the function.

Plastic

Reducing the use of plastic is something I very strongly believe in. Thus, we decided to replace plastic cups and plates with those made from palm leaf, wherever possible. Using steel spoons instead of the plastic variety was also something we managed to do.

Wedding favours

I wanted to give my friends something special for making the effort to attend my wedding. So I bought handmade paper envelopes from an NGO that supports livelihood generation for rural women and trains them on making these products.

Gifts

Indian weddings invariably involve the bride and groom and their parents receiving a lot of gifts, most of which are either unused or forgotten in a corner of the house. So after a talk with my fiancé and parents, we included a "presents as blessings only" line in each invitation card. This being India, however, some invitees (including those who were close to us) just had to gift us something, so we asked them for cash instead, a part of which we have donated to the social and humanitarian causes we support.

Two months have gone by since I got married. Looking back, there are a few things I may have wanted – a grand bachelorette party, a longer wedding, a destination wedding or fancier clothes. But, honestly, those fade in comparison with being able to stick to something I strongly believe in.

Some things about living in today's world worry me – that children need to be "sold" on doing or agreeing on something; and that people equate better social standing with greater material possessions. In attempting a less extravagant wedding, I probably didn't do much. But what if each of us did little things for our Earth and its people? Then all of us could together create a much better world.



Soumya Suresh works as the National Corporate Lead on the recruitment team at Teach For India (TFI). She is also a 2011 TFI Fellow where she taught Grade 4 and 5 in a low income private school in Mumbai. Prior to this, she worked as a financial analyst with JP Morgan and has completed her MBA in Finance.

A deep thinker who aspires to be a change agent, her interests include trekking, reading and occasionally dabbling in writing.

Path with a Purpose

A telecom engineer with expertise in Internet security systems in the Silicon City of India, one would imagine, was a person who lived out what the majority of us do, in these times: the consumerist dream... with no qualms whatsoever.

K.P. Singh, however, chose to respond to his calling and take the road less travelled. He quit his job and got involved completely in social and civic causes and has been engaged in building oases of responsible communities in our arid urban landscapes. Singh's story powerfully illustrates the changes that can come about through the serious intent and dedication of even a single individual.

A member of the faculty at Bhoomi College, K. P. Singh readily agreed to share his journey with **Rema Kumar**.

Rema Kumar: What was the turning point for you?

K.P. Singh: The first Bhoomi Conference, in 2009, had a deep and lasting impact on me. The talks by Shri Satish Kumar, Dr Vandana Shiva and Shri Devinder Sharma shook me, stirred something within me. Subsequent conferences helped bring clarity about the notion of a "good life." It became crystal clear that the unmindful pursuit of wealth and of consumption was neither good for us nor for Mother Earth.

RK: What within you enabled you to take this call?

KP: The clarity that the "good life" is NOT brought to us by unlimited material possessions and wealth: such a notion of progress and development is not at all sustainable! This helped me to do course corrections in my own life.

It became quite clear to me that what we should care about was clean air, water and safe food. I felt that I must spend the rest of my life working on these issues and spreading awareness about them. It no longer made sense to me to keep working on meaningless things just to earn more and more money.

RK: Tell us about the range of activities that you are involved in.

KP: Urban issues of drinking water, solid waste management and sewage treatment are the main areas where I spend most of my time. Protection and rejuvenation of lakes and encouraging communities to harvest rainwater and recharge groundwater are also activities that I am involved in because that will lead us to drinking water security. In addition to this, I spend time in spreading awareness and

encouraging residents [in the housing complex where I live] to grow their own fruits and vegetables in their balconies, terraces, kitchen gardens and empty plots. I also spend some time [being involved] in political and non-political movements like India Against Corruption and Swaraj Abhiyan. I spend a lot of time in the maintenance and upkeep of the residential [complex's] community, Rainbow Drive, in Bengaluru, of which I am a part. I have been part of their Managing Committee (MC) for the last seven years, and served as Honorary Secretary for three consecutive terms.

RK: What was your family's reaction to your decision?

KP: I got tremendous support from the family. My children have been very amenable to the changes that we have made to our day-to-day life. The fact that I became busier after quitting my job and that, on weekends, I am no longer [free] has been frustrating for [my wife], at times.

RK: What have been some of the challenges?

KP: The sudden drop in disposable income definitely posed challenges. We had to create a source of moderate income, to ensure that the children kept attending school and the bills were taken care of. I have a large family to support, back home in U.P. [the north Indian state of Uttar Pradesh]. I had to work with them, too, to ensure that they became less dependent on me. Another challenge has been answering the frequently asked question, "What do you do [for a living]?"

RK: Do you believe that individuals and communities need to take charge of their civic responsibilities and why? How did you garner support from others?

KP: I absolutely do! I strongly believe that it is time individuals and communities took charge and did things at their level, rather than wait for problems to reach a scale of such magnitude that action becomes not

Beautiful Canna plants flowering on the Phytoid bed



just difficult but impossible. What my experience has taught me is that the first step, however small, may not be easy, but soon enough others join you, and you draw strength and support from each other, and a momentum builds up. Some of us in the Rainbow Drive MC could see quite early the water issues that our [housing] society and Bengaluru, in general, were bound to face in times to come.

In 2007, we convinced all the MC members to go ahead and implement rainwater harvesting (RWH) and groundwater recharging, to set an example for the rest of the residents. We held open-house and awareness sessions, by calling experts and hydro-geologists and sending emails. We also hiked the tariff of the bore well water that we supplied to the residents. The intention was to ensure that residents become conscious of their per capita and monthly consumptions. Today I can say that we take our role of being responsible citizens seriously.

RK: When you look back at your journey so far, which are the moments that stand out?

KP: The journey so far has been very fulfilling. Meeting a saint like Shri Satish Kumar has been very precious. Through Bhoomi Network, I have been meeting many beautiful people who enrich my life more and more. Being part of last year's "Economics of Happiness" conference was, again, very rewarding. In my journey of ensuring water security in Rainbow Drive, there have been quite a few moments that are challenging and exciting. Implementing slab rates and hiking the water tariff to Rs 125 per kl – if the consumption of the household was more than 25 kl – was one such decision.

Although that needed quite a bit of convincing, once approved by the MC, it brought down the water consumption of many households significantly. Most of them brought their monthly consumption down to the sub-30 kl level. Another instance was our decision to make RWH and groundwater recharge mandatory for every house, failing which the community water supply was to be disconnected. I received threats of legal action from a few residents. I weathered all these and ensured that everyone complied with this decision within six months. We made sure all support and help, in terms of consultancy and



K.P. Singh with the sub-committee for waste management - Rainbow Drive

manpower, was readily available to residents so that they could get the work done without any hassle. I was often asked, "What's the guarantee that we will get water after groundwater recharge?" and "Where are the rains?" My response was that we needed to do our work and leave the rest to Nature! It was heartening, though, to see that the rains started as soon as we completed our work and the positive effects of recharging were experienced soon after the first rains. Our success story spread quickly to neighbouring residential layouts and many of them benefitted from our experience.

RK: You are, in your own way, becoming a jal-purush. Tell us about the specific initiatives you pioneered in your colony.

KP: After ensuring 100 percent compliance in groundwater recharging from every household, our next target was to ensure that we closed the water loop in Rainbow Drive by treating and reusing household wastewater. This was a huge challenge. We had two existing but non-functional electro-mechanical STPs [sewage treatment plants]. We had tried a few times to repair them; but this needed significant effort and money. The treated water quality was [thus currently] unreliable. After spending a couple of years in unsuccessfully working with the existing plants, we were able to convince the MC and residents that a new plant based on green technology would help us address the issues of high energy, high maintenance, complex operation and unreliable quality of treated water. We embarked on a long, intense [phase]

of identifying the technology, raising the funds, identifying the vendors and, finally, constructing the plant. But the end result was very satisfying. Today, Rainbow Drive, a 35 acre colony, appears to be the only colony to have implemented 100 percent RWH and the first colony in south India to have implemented an STP based on phytotrid technology. We are reusing the treated water for various non-potable purposes. We are also the first to apply to the Karnataka State Pollution Control Board to recharge the surplus treated water into the ground.

I signed off by asking KP whether he would describe himself as an idealist or a realist. He replied that he considered himself a realist who engaged with real issues and problems which he genuinely believes need to be addressed. He says he is also an optimist who keeps hope alive within him and anchors in faith as he walks on...



Rema Kumar is an educationist with over 20 years' experience teaching in India's schools. She has been involved with Prakriya Green Wisdom School, Bengaluru from its initial years, co-creating the institution and living out her dream of humanising education, in tune with Nature's principles. A passionate teacher, Kumar has keen interest in deep ecology and education for sustainability. An avid reader, a sporadic writer and a storyteller, she thrives on stories of hope and shares them generously.

Vegetables in the backyard



Narendranath & Manorama with a happy harvest of vegetables.

A retired physician in small-town Manipal in Karnataka sets an example in kitchen gardening and highlights the many benefits it brings, apart from yield. **Shree Padre** tells his remarkable story.

Since 2009, a retired medical doctor of Manipal town has unobtrusively been educating people on vegetable security. The doctor is involved in a different kind of practice now – growing vegetables and fruits in his kitchen garden. He spends about six hours a day ‘treating’ the plants. The result: his family is ‘vegetable-secure.’ Perhaps no other Manipal family is as fortunate to have such farm-fresh, pesticide-free vegetables and fruits, as Dr K.N. Pai’s.

Kochikar Narendranath Pai, 77, is deeply influenced by the following tenet of Mahatma Gandhi: “I cannot imagine anything nobler or more national than that for, say, one hour in the day, we should all do the labour that the poor must do, and thus identify ourselves with them and through them with all mankind.”

From roses to vegetables

Dr Pai had had no farming experience earlier. But he has been an expert on rose cultivation and raising vegetables and fruits for self-consumption has become his noble pastime.

In his triangular plot of land, there is no open space that has not been cultivated. His one-storey house is sandwiched between two green belts, one growing vegetables, the other, fruit trees. The garden is neither crowded

nor haphazardly occupied. Dr Pai has placed a board to identify each plant. The neat layout of the sloping land helps visitors take a look around easily. The vegetable patch has almost all the vegetables that are grown in the Malnad belt – amaranthus, brinjal, yam, ladies’ finger, bitter gourd, cucumber, chili, colocasia, drumstick, cowpea, little gourd, ridge gourd...the list goes on. The garden also includes most of the local fruits like banana, papaya, mango, cashew, sapota (cheeku), pineapple, wax apple, guava, cherry, bilimbi, lime and pomegranate.

“I don’t know much about growing vegetables and fruits,” Pai keeps saying, although his plants don’t seem to mind the fact. Years ago, to equip himself with farming knowledge, he had applied for a postal education course on organic farming offered by the University of Agricultural Sciences, Bangalore. The University had an age limit for admitting students for the course. However, sensing the doctor’s zeal, they waived that for him.

Fully organic

Common sense and the reading habit have enriched Dr Pai’s basic knowledge. Whenever he finds anything of educational interest in the newspapers, he files away the clippings. He has a huge pile of clippings on water, manure management, fruit cultivation, soil, etc.

Dr Pai has a helper, Puttu Naik, who works part-time with him. Naik collects dry leaves and cow dung from a nearby area, where a herd of cattle rests at night. The biomass in Dr Pai’s compound – old banana leaves and such – and leafy matter contributed by the neighbourhood are stored in a biomass chamber. This is added to the kitchen waste and composted in a smaller bed. Once in a while, Naik brings some wood ash from his home. “We don’t buy any chemicals, either fertilisers or pesticides,” Dr Pai points out.

Aren’t pests and diseases a headache? “No. In fact, good sunlight, air, soil and nutrients ensure that we have healthy plants. Not that we don’t get pests or diseases at all; but those are negligible. Readymade neem-based spray, Nimbicidin, and the age-old fungicide, Bordeaux mixture, are two plant protection solutions we use rarely.”

Dr Pai’s wife, Manorama, is a good cook. Every day, she uses ample quantities of vegetables. “But how much can two people finish?” she says. “We never sell the excess. We select some neighbour or other to give the vegetables to. Sometimes, we give it to former neighbours in the apartment nearby, where we lived for five years before moving here.”

Pai has the hobbies of reading

and writing. He has written many educational articles on health and gardening. He practised medicine at Sagar, a taluka-level town, in Shivamogga district, for 37 years. Prior to retirement, he had developed a backache that bothered him very often. But he recalls: "After I started this kitchen garden and doing the manual work needed for it, the ache gradually stopped. My life, earlier, was sedentary. Now I was bending my body, sweating and exerting myself physically!" Dr Pai firmly believes that gardening is a better physical exercise than walking. One of his pet quips is: "Gardening requires lots of water, most of it in the form of perspiration."

This green doctor displays boards in his garden inscribed with a few rules he believes in:

Don't throw out any biomass. Convert it into rich organic manure by composting.

Grow food only organically. Say No to fertilisers and pesticides.

Utilise every inch of land at your disposal.

Man is a born gardener.

Rainwater harvesting is the need of the hour. Do this as best as you can.

Rainwater harvesting

Ten years ago, after buying his plot of land, the first thing Dr Pai did was dig an open well. People in the neighbourhood discouraged him, saying that only a borewell would provide water. But Dr Pai knew what he was doing; he dug the well to a depth of 75 feet, and got water.

But the water level in it would go down at the end of summer although the Pais hardly used the well. After their house was constructed, this proved to be a source of anxiety. So without delay, he resorted to rainwater harvesting, about which he had acquired sound knowledge through his reading. The run-off from the roof was stored in a 10,000 litre cement tank. Two holes in its bottom ensured that the water percolated down. In addition, he dug two rain pits nearby.

"The soil here, laterite, is very porous," many visitors warned. "So what you are doing is, unfortunately, a futile exercise." They thought the stored water would merely run off somewhere. However, the doctor has



Pai has a seed bank storing all the vegetable seeds he grows. He happily shares a few sample seeds with interested visitors. In a small shed, he keeps seedlings of fruit and vegetable plants ready for distribution. Pick your own seedlings, they're free, say the Pais.

statistics to show that, despite what the others said, he has benefitted much from taking these measures. Now, every day, the Pais pump 1,000 litres for the kitchen garden; and, despite this, the late summer levels remain between six and seven feet.

A magnanimous gesture of this elderly couple is that they welcome visitors to see their kitchen garden. Dr Pai knows grafting. In fact, on a few occasions, he has visited nearby schools and given sessions to teach young students the skill and encouraged them, too, to do kitchen gardening. Now, on weeknights, a good number of students visit the Pais, as do others from nearby areas, drawn by his magazine articles on gardening.

Spreading the message

Pai has a seed bank that stores all the vegetable seeds he grows. He happily shares seed samples with interested visitors. In a small shed, he keeps seedlings of fruit and vegetable plants, ready for distribution. Pick your own seedlings, they're free, say the Pais.

A good number of people come

asking for seeds or plants. "Since they come on their own," muses this master gardener, "they must be paying close attention, raising at least a few plants. He distributes printouts on kitchen gardening to those who show interest in the art and, in addition to the principles he follows, he hands out valuable advice: "Retired persons should develop a good kitchen garden on available ground. It brings good physical health, mental peace and spiritual progress."

Doesn't this family buy any vegetables from the shops? "Once in a while, we do," explains Manorama. "We buy tomato, potato and carrots. Earlier, our weekly spend on vegetables and fruits was Rs 200. Now, the maximum amount we spend is a Rs 100 per month – for whatever we aren't able to grow here."

However, it is not financial savings that concerns this retired couple most. Says Dr Pai, "Kitchen gardening drives away feelings of loneliness. At this age, we need a good pastime. I don't like making needless small talk. As such, we find great pleasure in farming."

"That's not entirely true," teases Manorama. "He spends a good deal of time gossiping with his plants!"

All the three Pai children are successful doctors. While the Pais' two daughters are in Manipal, their son practises in the US. The senior Dr Pai's next plan is to construct a tiny poly-house to cultivate all vegetables through the year and ensure higher success rates with grafting. This former distant education farming student of UAS Bangalore has achieved a lot more than many professors and even practising farmers have done – through kitchen gardening.



Shree Padre is a journalist with many years of experience in agriculture reporting. He is the author of several books, including one on rainwater harvesting, published by Altermedia.

Go Bananas!

I M Pushpa

We live in times where exotic food captivates us and captures our attention. In that the goodness and richness of local foods and delicacies is missed out. Let us celebrate the local and reduce food miles at the same time. It isn't the apple alone that can keep the doctor away, the desi banana also assures us of myriad health benefits. From overcoming depression to protecting against muscle cramps; from relieving anemia to lowering blood pressure; from normalising bowel motility to relieving stomach ulcers, banana is a wonder fruit! And that is not all - the fruit, the flower, the stem and the leaf of the banana can be used in different recipes.

Banana Marrow Salad with Sesame Butter Dressing

Banana marrow has plenty of fibre and is excellent for heart patients as well as for general good health. Its neutral taste enables it to be used in many vegetable dishes.



What you need:

- Banana Marrow Chopped - 1 Cup
- Green Chilly - 1
- Butter Milk - 1 ½ Cup
- Coriander - 4Tsp
- Curry leaves a few leaflets
- Lemon - ½
- Turmeric Powder - ¼ Tsp
- Grated Coconut - 1 Full Cup
- Salt to taste
- Asafoetida less than - ¼ Tsp

Seasoning

- Oil - 1 Tsp
- Red Chilly [deseeded and chopped] - 1
- Slit Green Chilly 1

Method:

Cut the marrow into very small cubes, carefully segregating and discarding the fiber while cutting. Soak the cubes in butter milk. Stir it with a coarse wooden stick, as it is being stirred thin thread like fibre starts getting entangled on to the stick. Discard the fibre. Strain the cubes thoroughly.

In the meantime, wash and chop coriander and curry leaves. Mix 2 spoon coriander leaves, turmeric powder, coconut and salt. Add this mix to the stem and keep aside.

Seasoning:

Heat the oil, temper with mustard seeds, red chilly, green chilly, a pinch of asafoetida and chopped curry leaves. Add the seasoning to the banana cubes. Garnish with chopped coriander.

Sesame dressing:

- Roasted Sesame ½ Cup
- Lemon Juice ¼ Cup
- Jaggery powder 1 tbsp/to taste
- Garlic (3 - 4 pods)
- Water ¼ Cup

Blend until the mixture become smooth. Mix it well with the chopped banana cubes.



Steamed Sweet Idly In Banana Leaf

What you need:

- Ripe Robusta Banana 5 Nos
- Rice Rava / Navane Millet Rava
- Banana Leaves
- Jaggery Powder 2 Cups
- Cardamom 6 Nos
- Cubed Coconut 1 Cup
- Salt to Taste

Method:

Mash Banana well and measure it. Soak rava [twice the measure of mashed banana] for ½ hr. Peel and powder the cardamom. Mix all ingredients with the mashed Banana. Blanch the banana leaf over fire cut it into 6" square and ladle the batter on to the leaf, fold and arrange it one over the other in an idly steamer and steam for 10 minutes or until done. If leaf is not available pour the batter into the idly mould and steam.

Banana Flower Vada

What you need:

- Banana flower - 1 no. (roughly chopped)
- Onions (chopped) - 2 tablespoons
- Chopped garlic - 1 tsp
- Chopped ginger - 1 tsp
- Whole Red chili - 3 -4
- Grated coconut - 2 tablespoon *
- salt - to taste
- red chili pdr - 1 tsp
- turmeric - 1/2 tsp
- Mustard seeds - 1 tsp
- Curry leaves - a sprig
- Vegetable oil - 2 table spoons



Method:

A. How to clean the flower?

Peel the red outer layer. As you peel, a bunch of florets appear, keep the florets aside and discard the red petals. Repeat this process until one can peel the petals no further. Chop fine the small bulb that is left in the middle. From each floret discard the longest black headed stamen (which is extremely bitter) and chop the rest fine. Soak the chopped flower in buttermilk.



B. Soak Bengal gram dal for 1 hr

Grind it coarse. Chop onion, dhaniya, green chilly fine. Grind the ginger, red chilly, cinnamon and cloves to a smooth paste. Remove the soaked flowers from butter milk and strain thoroughly. Mix all ingredients with salt to taste. Make small patties and deep fry. To avoid oil, steam the patties in an idly steamer for twenty minutes, have it with mint chutney.

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I.M.Pushpa is the Garden-in-charge and a Facilitator with Bhoomi College. She is passionate about working on the land, saving and distributing seeds, enriching the soil, and making organic fertilisers.

She is well-versed in healing through home remedies. She is enthusiastic about cooking and sharing her recipes with others.

Mystery of Greenland's Vanishing Lakes Finally Solved

Scientists now know what causes the sudden drainage of some big lakes atop Greenland's ice sheet.

In 2006, researchers from the Woods Hole Oceanographic Institution (WHOI) and the University of Washington noticed that some glacial lakes drained away completely -- in just hours. Later, they found that the icy lake bottoms cracking open, could trigger the drainage.

Six to 12 hours before each draining, some water from the lake trickled to the bottom of the ice sheet through narrow conduits called moulins. As the water accumulated, it pushed up on the ice sheet until it broke through, allowing all the lake water to drain away.



Photo: <https://commons.wikimedia.org/>

A river of melt-water running down the slope of a toe of the Athabasca Glacier, Jasper National Park, Alberta, Canada

"In some ways, ice behaves like Silly Putty--if you push up on it slowly, it will stretch; if you do it with enough force, it will crack," stated Laura Stevens, a graduate student in the MIT-WHOI Joint Program in Oceanography. "Ordinarily, pressure at the ice sheet surface is directed into the lake basin, compressing the ice together. But, essentially, if you push up on the ice sheet and create a dome instead of a bowl, you get tension that stretches the ice surface apart. You change the stress state of the surface ice from compressional to tensional, which promotes crack formation."

This finding may help scientists better predict how much meltwater from the ice sheet is contributing to rising sea levels, especially as the climate in the region becomes warmer.

"It's half of the equation of how the Greenland ice sheet contributes to sea level rise, with the other half being the years when the ice sheet melts quicker than the snow is deposited," added Stevens.

By Jacqueline Howard

http://www.huffingtonpost.com/2015/06/05/glacial-lakes-draining-greenland-ice-sheet_n_7512682.html?utm_hp_ref=science&ir=India&adsSiteOverride=in

Disappearing Act of Himalayan Glacial Lakes

In just days in June 2011, a glacial Himalayan lake lost the equivalent of 42 Olympic-size swimming pools of water and then slowly refilled. (Typical meltwater runoff from the glacier in that time is 16 Olympic-size pools.) And for the first time, scientists caught this disappearing-reappearing trick on camera.

More and more lakes are dotting the tops of Himalayan glaciers, forming a mysterious system through which meltwater can move. "You could think of these lakes as being cancers that are consuming the glacier," Ulyana Nadia Horodyskyj, a doctoral candidate at the University of Colorado, Boulder, said.

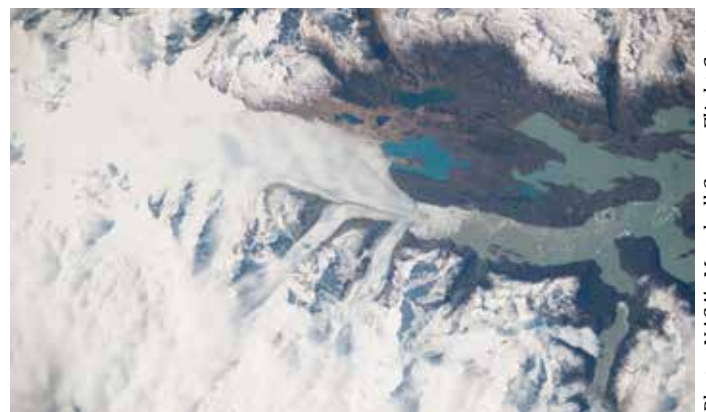
Horodyskyj and her colleagues have been installing time-lapse cameras to get a closer look at these cancers.

This June, one camera caught a lake atop Nepal's Ngozumpa Glacier suddenly lose a massive amount of water. In two days, the lake lost 3.7 million cubic feet of water. It was partially refilled from water farther up the glacier, Horodyskyj said, about 1.76 million cubic feet (50,000 cubic meters). Refilling took about five days.

The sudden lake drain is likely caused by shifting ice opening a crevasse, or perhaps by massive amounts of water pressure opening cracks in the glacier's ice below, said Horodyskyj. "Think about two bathtubs connected via a pipe," she said, the lakes form a similar network. On Ngozumpa alone, Horodyskyj said, are about 200 lakes, and water flow in one lake can affect others.

Understanding Himalayan glacier meltings is important, because the populated valleys below are vulnerable to floods from glacial melt. High glacial lakes dammed by dirt or ice can erupt from their confines, causing known as a 'mountain tsunami.'

Lakes atop glaciers are becoming larger and more common as the climate warms



Upsala Glacier Retreat, Patagonia Icefield

By Stephanie Pappas

<http://www.livescience.com/17362-glacial-lake-disappearing-video.html>

Photo: NASA's Marshall Space Flight Center

Why Just Maggi

There are BIGGER Rakshas out there!



Yes we are glad (and a bit sheepish) that Maggi has been exposed. Maggi swept us off our collective gastronomical feet because it was not just tasty, but a two minute wonder that even little children could cook.

We have heard about the MSG and lead in Maggi which could cause brain and liver damage. But why only Maggi – there are bigger Rakshas out there, in the form of many EDCs or *Endocrine (or hormone) Disrupting Chemicals* - biologically active chemicals found practically everywhere in our modern world.

All kinds of plastics, personal care products, food, water and many common household goods, are major sources of exposure to EDCs in miniscule quantities that can yet result in an accumulation of toxins in your body. Children are as usual, at greatest risk for adverse effects. EDCs are similar in structure to natural sex hormones such as estrogen, thereby interfering with their normal functions, and hence they can create slow and terrible havoc to the body, including neurological disorders and cancers.

The Environmental Working Group (EWG) in the US recently published a list of the 12 worst hormone-disrupting chemicals you may be coming into contact with regularly. As stated in their report: *"There is no end to the tricks that endocrine disruptors can play on our bodies: increasing production of certain hormones; decreasing production of others; imitating hormones; turning one hormone into another; interfering with hormone signaling; telling cells to die prematurely; competing with essential nutrients; binding to essential hormones; accumulating in organs that produce hormones."* In other words, these endocrine disruptors interfere with the work of the body's natural hormones secreted by our various glands (thyroid, pituitary, adrenals, pancreas etc) which are crucial for our health.

The 12 Worst Hormone-Disrupting Chemicals

Lead, which was found in higher than permissible levels in Maggi is only one of the 12 worst EDCs in our food and everyday products, according to the EWG. The others are:

Bisphenol-A	Dioxin	Atrazine
Phalates	Perchlorate	Fire Retardants
Lead	Mercury	Perflourinated chemicals
Arsenic	Glycol ethers	Organophosphates

WHO Report

The World Health Organization (WHO) recently announced³ a new report co-produced with the United Nations Environment Program (UNEP), titled: «State of the Science of Endocrine Disrupting Chemicals.» The report suggests that outright banning endocrine disrupting chemicals (EDCs) may actually be needed to protect the health of future generations...

Health Problems caused by EDCs

This and other studies say that the following are some of the health problems caused by exposure to EDCs:

- Learning and memory difficulties; neurological disorders
- Prostate Cancer and non-descended testes in young males, as well as thyroid and breast cancer
- Attention deficit hyperactivity in children (ADHD)
- Infertility and reduced fertility
- Obesity, diabetes and cardiovascular disease

Tips to Help You Avoid Toxic Chemicals

Here are some recommendations to eat and live healthier:

- Buy and eat organic produce and free-range, organic meats to reduce your exposure to added hormones, pesticides and fertilizers. Use organic toiletries.
- Use glass or stainless steel containers and cookware rather than plastic wrap, boxes, non-stick pans etc.
- Use glass baby bottles and BPA-free sippy cups, teething rings etc for your little ones.
- Eat mostly raw, fresh foods. Processed, prepackaged foods (of all kinds) are a common source of chemicals such as BPA and phthalates.
- Avoid mattresses and cushions with plastics based stuffing, stain/water resistant furnishings and clothes. Remove your vinyl shower curtain if you have one.
- Replace feminine hygiene products like tampons and sanitary pads with safer alternatives.
- Avoid artificial air fresheners, dryer sheets, fabric softeners or other synthetic fragrances.
- Look for products that are fragrance-free. One artificial fragrance can contain hundreds -- even thousands -- of potentially toxic chemicals.

What can you use instead?

- Baking soda can replace shampoo, face and body scrub and is even a natural deodoriser. Besan is a good cleaning agent for oiled hair as well as the body.
- Toothpowders made of natural products like charcoal, neem etc are available
- Liquid castile soap, hydrogen peroxide, white vinegar, baking soda, and lemon juice can make a good household cleaning agent.
- Coconut oil is great for the hair, body and a good moisturizer and wrinkle reducer. It also helps exfoliate the outer layer of dead skin cells, making your skin smoother

Sources: www.mercola.com. Web Links from MedlinePlus (National Library of Medicine)



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1 September – 30 September 2015

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21 November - 30 November, 2015

The course will explore every aspect of non-violence from paradigm of Science and technology to structure of politics and economics. The roots of increasing violence against earth will be addressed. The dialogue will include a search for making peace between earth and its communities.

For further information, contact at: bija@navdanya.net Tel: +91 11 268 532 772

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July - September 2015

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July - October 2015

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- July 11 Follow your Green Impulses
- July 25-26 Macro Photography by ILAA
- Aug 8 Organic and Terrace Farming
- Aug 8 Charcoaling with Nature
- Aug 22 Let's Tangle
- Sept 12 - 13 Macro Photography in the Sharavathi Rainforest
- Sept 19 Economics of Happiness Workshop
- Oct 2 Seminar: Education for the Future
- Oct 3 Bhoomi Utsav / Farmer's Market

For enquiries and registration please contact:
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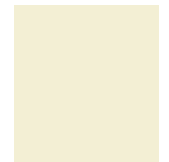
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Apart from the holistic and cutting-edge curriculum the Bhoomi College provides, it is a meeting ground for students with some wonderful teachers who have done path-breaking work. The generosity and wisdom of these great teachers have made Bhoomi's courses more exciting and valuable.

These are much more than educational courses - they provide a space to discover new avenues of adventure, of giving back to the world through meaningful work that would nourish your spirit as well

**Join in. Log onto www.bhoomicollege.org
or write to bhoomi.college@gmail.com**



Shri Satish Kumar

Satish Kumar: walked 8000 kms in 1962, from India to Europe and the US to campaign against Nuclear Weapons, with the blessings of his Guru, Sri Vinobha Bhave. In 1973, he settled in England, taking on the editorship of Resurgence Magazine and becoming the guiding spirit behind a number of ecological, spiritual and educational ventures. He was the driving force in the establishment of a unique institution, Schumacher College in the UK.



Philip Franses

Philip Franses: has been a member of the Faculty team for the MSc in Holistic Science at the renowned Schumacher College, UK. Academia's dull explanation of the world inspired Philip on a counter-journey into the depths of experience, travelling and a re-sensitisation to quality. Philip began and edits the Holistic Science Journal and is also the convener of a successful inquiry forum called Process and Pilgrimage.



Helena Norberg Hodge

Helena Norberg-Hodge is a pioneer of the localization movement, and the Founder and Director of the International Society for Ecology and Culture (ISEC), a non-profit organization concerned with the protection of both biological and cultural diversity. Her book *ancient Futures* has been described as an "inspirational classic". by The Times and has been translated into 42 languages. She now lives in Australia



Dr. Madhu Suri Prakash

Madhu Suri Prakash is a professor of Education at the Pennsylvania State University and is recipient of the Eisenhower Award for Distinguished Teaching. In addition to numerous articles in professional journals she has co-authored *Escaping Education – Living as Learning within Grassroots Cultures*, with Gustavo Esteva.

Our favourite supporters of the month!



I have always felt a strong connection with the earth, with nature, and with our planet. The Bhoomi Magazine and Vision speaks to that part of me which has been deeply connected to and rooted in Bhoomi itself. Reading and learning about people and ventures who feel similarly is immensely satisfying and that is why I like to read the Bhoomi Magazine."

Ramya Ranganathan,

Organisational Behaviour and HRM Visiting Faculty, IIMB



I have been a reader of Bhoomi for many years. It stands out as it appeals to both the young and the old. It is refreshing, it offers perspectives which give people things to think about and alternatives for action."

Sarvesh Iyer, Student, IISc

Internship in Self and Community Processes

Bhoomi offers a set of 6 to 10 day programmes (offered in April/Sep every year) that can support those who wish to be anchors / facilitators in schools, NGOs and other organisations and movements.

The purpose of these programmes

Today, what we need is not only technical knowledge and skills for sustainable living. The greater challenge is fostering new kinds of leaders with the vision and ability to co-create groups, organisations and communities that focus on positive action collaboratively and creatively.

Bhoomi College has focused on nurturing and supporting such aspiring leaders through intensive group participative, experiential sessions. Through integration of concepts from systems thinking, interpersonal process work, ecology and organisational behaviour, these programmes nurture a greater sensitivity to issues of sustainability and insights to deal with complex issues of building organizations which foster a culture of ecological and social wisdom within communities.



Focus areas of these programmes

1. **Inner Ecology:** Applying Nature's principles to ourselves and our relationships.
2. **Deep Ecology, a Retreat:** Learning from a rainforest, deep self-exploration and collaborative work
3. **Systems Thinking** and Leadership through Eco-Psychology
4. **Building Eco-wise Communities** by mobilising the positives within their culture

What is special about these programmes

The group processes are participatory, reflective, inclusive and lively – making it a rich experience that can connect us more deeply with Nature and to others in the group / community. These programmes are anchored in offer a holistic approach, giving equal importance to practical, intellectual, emotional and spiritual aspects of ourselves.

How will these programmes help me as a manager in an NGO or facilitator in a school ?

A deeper exploration and understanding of oneself and one's patterns of thinking, feeling and action is of great value to facilitators in any situation. Co-evolving perspectives of your own supports you with frameworks and mental models to work in a more wholesome and meaningful way with groups and communities.



The Bhoomi College

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If these aspirations are yours and you wish to be part of the solution, Bhoomi College will support you through these two intensive one-year learning opportunities:

1 Year Post Graduate Courses

Diploma in Science & Management for Sustainability

Starts 10 August 2015

What this programme offers :

- An understanding of root-level social, economic, cultural and environmental issues, holistic science, human & group processes
- Strategic affirmative-action approaches, including self exploration, to change the game for yourself and others
- Knowledge and skills for pursuing green careers
- An ecosystem for operationalising your entrepreneurial ideas



Diploma in Holistic Education

Starts 3 August 2015

What this programme offers :

- Concepts and philosophies in education, brain science and holistic learning
- Exploration of one's psychological and interpersonal strengths
- Hands-on engagement with children to facilitate their learning and catalyse their mental processes
- Principles and practice of systems thinking

What you can expect at Bhoomi College:

- ✔ Seasoned teachers and expert facilitators
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- ✔ Enriching learning processes
- ✔ Labs to co-design learning projects and activities
- ✔ Internships with NGOs, schools and institutions
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