



Urban Rainbows

A Selection of Green Practices in the Archdiocese of Bombay



Published By:

Archdiocesan Office for Environment (AOE)
at St Pius College, Aarey Road, Goregaon (E), Mumbai 400063
Email: bombaydioceseenvironmentoffice@gmail.com

Supported By:

MISEREOR, Germany

Contents

FOREWORD	3
A Note from the Compiler	4
 GREEN INITIATIVES:	
Our Lady of Health – Sahar	5
Suren Abreu	
Our Lady of Nazareth – Bhayandar	7
Kalpana Dabre	
St John the Baptist – Thane	10
Allwyn D'Silva	
St Charles Convent – Vakola	13
Bernadine Fernandes	
Young Environmentalists Programme Trust – Powai	14
Elsie Gabriel	
DIRT – Bandra	17
Christopher Pereira	
Garbage Concern Welfare Society and 3S Envo – Charkop	20
Francin Pinto	
Infant Jesus – Jogeshwari	24
Felix Rebello	
Sarvodaya – Goregaon	27
Meenal Rodrigues	
GreenLine – Matunga	28
Savio Silveira	
Institute for Community Organisation Research – Goregaon	32
Deepika Singh	
St Anne - Mazagaon.....	35
Vincent Vaz	

FOREWORD

Pope Francis in his Encyclical Letter *Laudato Si'* states in Nos 53 to 59 "Situations have caused sister earth, along with all the abandoned of our world, to cry out, pleading that we take another course... It is remarkable how weak international political responses have been...In some countries, there are positive examples of environmental improvement: rivers, polluted for decades have been cleaned up; native woodlands have been restored; landscapes have been beautified thanks to environmental projects, beautiful buildings have been erected; advances have been made in the production of non-polluting energy and in the improvement of public transportation. These achievements do not solve global problems, but they do show that men and women are still capable of intervening positively."

The Church in Mumbai has proved, during the past few years that institutions and individuals are still capable of intervening positively. We are publishing some initiatives which have taken place in Mumbai. We hope that these examples of care for creation can inspire others to take simple steps to reduce the effects of Global warming.

I thank all those who have willingly contributed to Urban Rainbows. A special thanks to Ms Shawna Nemesia Rebello who interviewed all the contributors and compiled their conversations.

Fr Allwyn D'Silva
Head, Archdiocesan Office for Environment

December 2015

A Note from the Compiler

The following were the questions provided by the AOE that the selected resource persons had to answer:

- How do you perceive the impact of Climate Change in India, in your region?
- What motivates you to get involved for climate justice/ Environment?
- What actions have you taken in your Institution/ Organisation/ as an individual regarding safeguarding the environment? Could you please share some good examples?
- What is your message to the Christians/ People of other faith/ every citizen?

My task seemed straightforward: visit the area, conduct the interview and make an article. Take and ask for photographs, obtain the required information by email if the person was unavailable. I expected to have enriching interactions with them which would inspire me to live greener. My expectations were greatly surpassed. Each of these featured twelve people is a rainbow – brightening the gloom, providing natural beauty and greening an otherwise concrete jungle.

Presenting their answers in a way that recaptures the inspiration I had while interacting with them is therefore no easy task. In each article, I have tried to present the same phrases used by the interviewed persons in a better sequence, only providing minimal additional data for clarity. These additions too, have been sourced mostly from their websites and provided supplementary material. The articles chronicle a range of green initiatives, from simple low-impact lifestyles to eco-festivals to mobilising masses in campaigns, but are mere glimpses and are by no means comprehensive. If the articles fail to ignite a spark in you to begin living green or going further with your own endeavours, then meet with any one of them personally. I can vouch that you will come away galvanised!

I thank Fr Allwyn for giving me the opportunity to interact with all these inspiring personalities and Rosebell for setting up the interviews and other required groundwork. To the few contacted people whose interviews could not be conducted, my apologies.

Shawna Nemesia Rebello

Our Lady of Health – Sahar

Suren Abreu

Assistant Priest

“Love Mother Earth...she’s the only one we have. Walk. Conserve water and electricity. Live simply” – this is the lifestyle Suren adopts and the footnote of all his emails.

Indeed, Suren does not own or use a mobile phone. He does not have a personal vehicle at his disposal, but walks wherever he can, uses a second-hand bicycle within Andheri or even further, and takes public transport to commute long distances. As often as possible, he washes his clothes by hand, saves water in the bathroom/ toilet and ensures no tap leaks. Suren uses only as much lighting as required, and switches off appliances at the mains. His paper-saving measures include making envelopes out of calendar sheets, and utilising paper which has already been printed on one side. And he eats vegetarian – which is environmentally beneficial as less resources are consumed to produce grains than meat.

Suren links the effects of climate change such as increased base temperatures, erratic rainfall, longer dry spells, and severe water shortage with adverse impacts on cropping patterns, forestry, water harvesting, irrigation and soil fertility. The knowledge that his carbon footprint has a direct bearing on the crisis facing the Earth as well as the sense of responsibility towards nature of which we humans are only a part motivates him to work for preserving the environment. He initiated the use of one-side-used paper for printing back in 1999 in his first parish and has continued it everywhere since, so in Sahar, it has been happening from 2011. The office prints notices, banns of marriage, and other material on paper that is used on one side which is obtained from people working in companies.

Over 200 trees were planted in different areas of the parish in June 2012, more such drives being hampered by lack of sites to plant trees due to extensive construction work in Sahar. In 2013, there was an overhaul of electric fittings and wires to reduce electricity loss, also halogen lights in the compound were replaced by solar-powered lights that have light sensors for automatic switching on and off. Tetra Pack collection drives throughout the year too started in 2013, and continue



Tree plantation drive

to date in the Regular and Sunday Schools. Collected tetra packs can be recycled to recover their paper, plastic and aluminium contents or even incinerated to recover heat and energy.

The Sunday School began incorporating green measures in 2014, with regular sessions on environment and resource conservation being conducted in a running program from kindergarten to tenth standard with themes like Food Wastage, Water Conservation, Importance of Trees and Deforestation, Plastic Waste, the Garbage Menace, Energy and our Carbon Footprint. These themes will be covered in a cyclic manner so that every child is exposed to them. The format of the Sunday School program is very simple: a starter video or exercise followed by a group discussion, then a brief input on the environmental topic for that class, a brain-teaser video that is directly linked to the topic followed by a more intense group discussion or group exercise, a summation, and resolutions with the sessions lasting around 90 minutes. This is a work-in-progress and Suren hopes to have it printed by April-May 2016.

The children take resolutions on water conservation, avoiding food wastage, saving paper, reducing plastic use, etc. about which they are regularly reminded by the teachers. The little ones have even put their resolutions into practice - Sunday School projects for Parents Day were largely made from reused paper or recycled materials. As part of their commitment to preserving the environment, the children are learning how to plant saplings and nurture them - they proudly planted saplings in August 2015.



Parents Day wall-hangings made from old CDs and flower cut-outs from used chart paper with a family picture in the centre (KG)



Parents Day hearts made by drawing two open palms to form a heart on one-side used chart paper with messages on the palms (Std IV)

Such initiatives for environmental protection are not merely charming, but vital to sustain ourselves. As Suren aptly puts it, "Nature does not need us....we need Nature. So if we choose to keep on abusing Nature at this rate, we will soon be one of the many species rendered extinct and Nature will rejuvenate herself."

Our Lady of Nazareth – Bhayandar

Kalpana Dabre

Co-ordinator, Nazarene Paryavaran Parivarthan Prayas

Nazarene Paryavaran Parivarthan Prayas (NPPP) is an environmental action group forum formed in 2008 of students, teachers and parents of Our Lady of Nazareth School. The NPPP has set objectives and is involved in various programs and activities aimed at students, parents and teachers on the issues of environment/ecology, while reaching out to the community in and around Bhayandar. The greening activities that were going on at Our Lady of Nazareth were very different from Kalpana's previous health and social work experience. Intrigued by the prospects of learning something new and being able to reach out not only to people from the slum but also the school children along with their parents and teachers, she was inspired to join the NPPP and work for the environment.

Kalpana recollects the clockwork regularity of the monsoon in her childhood. It was a given that the rains would start on June 7 and stop September end. That familiar schedule has been replaced by irregularity, it now rains anytime. Going out in the sun is problematic because the trees that used to provide respite have been cleared for cement and concrete construction. She relates to the *Koli* people from the nearby Uttan and Manori areas – rising sea levels, exacerbated by indiscriminate dumping of garbage are pushing their houses further and further inland. The problems we face are a consequence of the harm we are doing to the environment, and hence we all have to work for environmental protection.



Solar panels fitted atop lights in the compound

The period between the years 2008 and 2011 saw the establishment of many green initiatives inspired by Fr Allwyn D'Silva, the then parish priest. He initiated *morchas* to clear the aforementioned dumping ground. Rainwater harvesting began and solar lights were installed in the campus. A terrace garden with emphasis on cultivating medicinal plants was developed. It was later shifted to the ground level due to load bearing structural concerns. The garden is organic, bio pesticides and compost is used to maintain the garden rather than conventional chemical products. Some of the health plants cultivated include *brahmi* (good for

strength and memory), aloe vera (cuts and burns), *adulsa* and lemongrass (cough). Syrups and food preparations like chutneys, *laddoos*, etc. are prepared from these plants. Tiffin services using these health foods provide nutritious food for the students. Also, the bio composting initiative within the premises is running well. Rabbits are kept because their urine is good for the composting process. Mixing with mud and sufficient space ensures no odour problems arise.



Medicinal garden



NPPPP cloth bag

A unique money-saving scheme for students facilitated waste segregation and management at the household level. The children would sort out their waste, be it newspapers, glass bottles or even cycles, and put the money every month into the NPPPP scheme. On leaving the school, participants would get a certificate with the deposited money and interest. Within a single year, the NPPPP was able to collect Rs 1,50,000. Though this was discontinued due to professional fees being paid to expert consultants, many students did benefit from the scheme. Cloth and paper bags were also made and distributed by NPPPP members.



A blank "Kacchre ka Passbook"

In Kalpana's experience, "*log jag ke saath chalte hai*", and they lack environmental awareness. Rather than blaming the public or government inaction, she believes that the power of the media should be harnessed to save our environment. Even small individual initiatives like segregating and reducing the use of plastic bags will have a positive impact. At the individual level, Kalpana has a solar water heater, rainwater harvesting tank, composts at home and makes it a point to carry a cloth bag with her at all times. Instead of gifting toys to children, she suggests giving them a plant; tell them that the plant is a friend to be taken care of. For every tree cut, four should be planted in its place. Targeting the children will result in a slow but definite shift in attitudes toward environment protection. Not protecting nature, Kalpana believes, is a sin for us Christians. She cites 3R as her message to all - Reduce, Reuse and Recycle.

St John the Baptist – Thane

Fr Allwyn D'Silva

Parish Priest

With inputs from Fr Michael Pinto

Among numerous other portfolios, Fr Allwyn is the Head of the Archdiocesan Office for Environment, and Secretary for the Federation of Asian Bishops (FABC) Climate Change Desk.

The many workshops and meetings which Fr Allwyn has participated in over the past twenty years made him realise the seriousness of climate change. He points out the uncertainty of the weather, rising temperatures, the recent floods in Chennai, Philippines and Myanmar – incidents all over the world which everyone has seen, felt or heard about as irrefutable evidence of climate change. Nobody can doubt its reality anymore. *Laudato Si'* has inspired him to work even more whole-heartedly for climate change. Fr Allwyn urges the Church in Mumbai and all believers to take this topic seriously. “We are heading for a crisis which will affect the future generations,” he says, “We have an obligation to hand over a beautiful world to the next generation”.

Fr Allwyn's response to climate change is rooted in faith, because to care for creation is to manifest one's love for the Creator. So, the more we care for creation, the more spiritual we become. At St John the Baptist, he has spearheaded several good practices and awareness initiatives over the past few years to make the parish environment-friendly, thus making parishioners advocates to take this cause further to their homes and community at large. Holy Hours and prayer meetings are being conducted regularly to espouse and dwell on parishioners' participation and involvement in caring for creation through a change of heart. The parish also published a book titled 'Go Green Initiatives'. For Lent 2014, booklets titled '40 earth-saving ways to Fast this Lent' / 'Carbon Fast' were distributed. The parish monthly magazine “Locusts & Honey” prints energy-saving tips from time to time.

The parish environment club was formed in 2012. There was an enthusiastic response to cleanliness drives at Thane station and Masunda lake organised that year by the club. Beverages were served to the drives' participants in reusable glasses instead of disposable cups. The following year saw a “Say no to plastic” campaign, where the environment club put up stalls selling locally made cloth bags. At present,

the club members are deliberating approaches for waste minimisation in the premises and community. A biogas plant has been operational in the church premises since 2013. Food waste, leftovers from weddings and waste from the local vegetable market are utilised to produce the biogas used for cooking at the refectory.



Biogas plant

In 2012, on-grid solar panels were installed for providing direct power to St John the Baptist School. The restoration of the church (inaugurated in September 2015) and the new Johannine Centre built to house the church office and host meetings provided several greening opportunities. A single large fan provides breeze over a large section inside the church. LEDs replaced incandescent lighting in the church and grounds. The Johannine Centre has provision for rainwater harvesting, and was built with large windows which let in ample natural light. Electricity costs and consumption have already come down.



Central large fan inside church

The St John the Baptist School, under Principal Fr Michael Pinto, has been aspiring to make every child a 'knight of nature'. Since 2012, various awareness programs and exhibitions on the environment are being held every year, with medicinal and rare plants being showcased at the most recent exhibition. Innovative measures to safeguard the environment are in place, an interesting example being the Green Room. Students bring in old outgrown clothes and other waste from home. These are then used to make outfits for various functions, so the school no longer has to hire any costumes. The theme for Independence Day this year was Climate Change with children learning songs such as "Mother Earth It's a Great Place to Be". Eco-friendly Diwali had the children contributing the money to the municipal schools and hospital that would have otherwise been spent on buying crackers. Circulars on the ill-effects of crackers were prepared and sent to other schools. Environment is the focus of Annual Day 2015 featuring a talk show, eco-friendly dance, green awards for students and parents, etc. while beautiful charts on climate change are on display in the school. A cycle rally with Green Santas spreading green messages was held on 17th December. The Nature Club is thriving - the seed has been sown in good soil!



Leaf-shaped Annual Day 2015 invitation card

St Charles Convent – Vakola

Sr Bernadine Fernandes

Superior

A nature lover infatuated with creation, Sr Bernadine finds the present state of Earth, our home, scary: sea levels are rising, rivers are fouled, fauna and flora are devastated, and the city is facing water shortage due to the lack of rain this year. Anthropogenic activity has deleterious effects even on remote polar glaciers, making them melt. Not satisfied with polluting the Earth, humans have launched artificial satellites and probe missions which have even junked up space and other planets.

City children today do not have the opportunity to see nature, a pity because, “by nature, children love nature”. Sr Bernadine draws their attention to the now rare sight of a butterfly whenever the chance arises. She encourages them to admire nature, but not to touch it so that all can enjoy, rather than a few grabbing or plucking. She also advises them to go in for the more expensive handicrafts because the tribal people are patronised and can subsist. Many eco-friendly programs are run by the school (St Charles Girls’ School) and environmental awareness is promoted during assemblies, functions and inter-school events through plays, dialogues, skits. Potted plants are being presented to guests at school events since over ten years ago. The theme for Parents Day this year was ‘Save Mother Earth’ for which special songs were composed. Students are told to grow potted plants at home, bring their plants to school and write about how the plant grew. This becomes a family effort because even the parents get involved and the whole family partakes in the joy of seeing nature grow.

Sr Bernadine would like to have a compost pit at the convent, but has faced rat menace. Being a school environment, the children’s safety comes first. However, the sisters do segregate their waste. They also avoid the use of plastic bags as much as possible. Sr Bernadine never goes anywhere without carrying her own bag to minimise plastic use. She thinks twice though before watering the plants in times of water cuts. “How can I maintain a garden,” she asks pointedly, “when other people are deprived?” When prompted for her message, Sr Bernadine said, “The word ‘Christian’ embraces everyone and is not limited to our religion. The whole universe and all creation belong to one Father. Show Jesus to others, we have kept Him too much for ourselves.”

Young Environmentalists Programme Trust – Powai

Elsie Gabriel

Founder

The Young Environmentalists Programme Trust is an NGO comprising professionals like lawyers, teachers, professors, corporates and other highly experienced adults. It was founded a decade ago by senior journalist Elsie Gabriel, and is '*Equipping Environmental Leaders of Tomorrow, Today!*'

Elsie was involved in relief work in Filterpada after the 2005 floods in Mumbai. The condition of the affected poor people was pitiful and prompted Elsie to investigate the cause. She saw that small industries were polluting the Mithi river and the drains were clogged with plastic bags. The environmentalist Valsa Nair advised Elsie and other supporters that the north-east area of Mumbai needed a strong environmental NGO. Thus the Young Environmentalists Programme Trust was born. It has now over 300 members, of which fifty of them are very active.

The NGO's foremost focus is on community education. The biggest project is working to ban plastic bags. However, they could not fight against the plastic bag association or the mind-set of the adult community so the NGO went in for interactive education. Rather than preach, members distribute cloth bags outside shopping malls, the local markets and at traffic signals so that people will get the message and go biodegradable. A popular project is 'Greening the Blue'. This consists of making old denim jeans into designer bags or pouches instead of throwing them away.



Cloth bags being distributed at a fish market

Community education and religion wherein festivals are celebrated in an eco-friendly manner has been the NGO's strongest foothold for the last ten years. The eco-Ganesha workshop, in particular, is very popular and obtained the Mayor's Award two years ago. Workshops are conducted in the play-way method. The clay was taken from the Mithi river, the silt from Powai lake and garden clay to make idols just like our ancestors used to do. Children were encouraged to touch and feel the mud - when was the last time a city child did so? As a result of the NGO's work, the pollution department and the Maharashtra environment department are considering taking a policy decision that every Ganesha be checked if it is eco-friendly or not.

Eco-Christmas is celebrated by ensuring that everything is recycled and green gifts are given. Solar lanterns are gifted to the downtrodden students in slums. Up to 200 people gather impromptu when carol singing takes place at road corners. The Nativity play is performed on the street.

Elsie has authored a book titled 'Get Going Outdoors,' which tries to bridge the gap between the digital world and the environment and bring the city children back to nature. The most pivotal work of the NGO is EVS education in 300-400 city schools. The children are encouraged to do their own research and submit quality project work based on quantitative research which prevents them from doing the usual copy-paste job. Students have routinely been scoring 100 on 100 in their EVS projects! They are also given programs like how to cook outdoors, photography and environmental journalism, so that it becomes fun and they are not taxed with rote learning another subject.

Elsie is also involved in environmental education in Sunday Schools. For juniors, she starts with the Genesis - creation and the value of wildlife conservation, how God asked Noah to take pairs of wild animals on board the ark because God did not want them to go extinct. The seniors are told to reflect on the environment teachings, pick out chapters in the Old Testament and New Testament where creation is given so much of abundant focus and learn from it. The teachers are instructed to ask the children to reflect, discuss and draw creation. Children are also asked to connect the environmental calendar with the Christian calendar.

The NGO gets its funding from local shops and brands around Powai. Every June 5th, a big tree plantation event is conducted. Also notable is the establishment of the ALM in Powai. Instead of criticising the BMC, members work with the government and encourage citizens to even inspect garbage centres. During the monsoon, the

BMC tells them to put stickers of landslide warnings in the slum area and caution residents reluctant to move for fear of losing their huts.



Elsie with Mr Al Gore, former US Vice President. She is also the mentor for India of the latter's Climate Reality Project

Elsie's message is simply to be the change we want to see in the world and never ever feel that our planet Earth cannot be saved. It is our first home, one we leave behind for future generations. So instead of a *jhoota* world, make sure we leave behind an enriched, green, refuelled, prosperous, environment-friendly world for the next generation.

DIRT - Bandra

Christopher Pereira

Co-founder

DIRT is a social enterprise committed to upcycling, i.e. reusing discarded material to create products of higher value than the original.

The foundation for DIRT was laid around four years ago. Parishioners of Mt Carmel's in Bandra, including Christopher, were involved in the local ALM. Garbage was one of the major issues, with residents blaming BMC inaction for their waste disposal woes. Christopher discovered that the BMC guidelines say that residents should compost their food waste and reduce their reliance on the garbage trucks. And composting, he puts it wryly, is better than sending waste to dumping grounds and funding an entire landfill mafia along the way.

However, the community was opposed to the idea of composting - stink, rodents, sickness, and a host of other "excuses". Christopher determined that there ought to be a way of composting while avoiding all these problems and keeping the price reasonable. He sourced drums from roadside vendors and set up compost tumbler bins at his place and at another parishioner's. These were working fine even after one and a half months. The parish priest at the time requested a composting unit to be set up in the church premises, and the parish office too began segregating their waste. Christopher designed closed bins with tiny holes for aeration which are to be periodically turned for proper mixing of contents. When properly done, there is no odour, rodents cannot get in, and the bins can even handle non-vegetarian food waste. A website was made, communities and societies from Kamshet, Hyderabad, Parel, Vasai, Chembur, etc. all began taking up composting.

Eventually the DIRT store was set up in June 2014 featuring a vertical garden, composting solutions, furniture from scrap. There are plants all around which are tended to by botany expert Priyanka Shah. Bathroom water is put through a series of holding tanks equipped with aquarium aerators, charcoal and sand filters while aquatic plants absorb phosphates from soap. The resultant water is clean enough for the plants. The indigenous system occupies a space of about 2x12 feet, water is recycled in twenty-four hours with a daily output of 200 litres which is sufficient for watering all the plants and the garden. Christopher aspires to use natural methods and provide simple technology for composting and water recycling at affordable

rates to the public. He is looking for skilled people, investors and a locality to further develop and set up such systems, courtesy the “too many Thomases around who need to see, feel and touch things to believe and be convinced”.

Funding DIRT wasn't easy - Christopher, along with co-founder Natasha D'Costa had to put in their money. Initially they would grow only what they liked and the plants were susceptible to diseases. Instead of combating with chemical sprays, Urban Leaves advised them to just increase the biodiversity and nature would balance itself and become healthy. DIRT now has a life of its own, the plants are thriving, and the store is growing and funds itself. There are workshops on growing, planting, composting and programs for schools too have been conducted. Compost was tested separately at Pune and Mahim and found to be of good quality. Florists sell compost at Rs 40/kg in Bandra. Garbage cleaners, many of whom Christopher does not know or recognise, hold him in high regard because he has shown them another way of making more money by selling compost at different places.



DIRT products: Compost bins, Bottle lights, Vertical planter

For Christopher, understanding nature is imperative to understanding God. His perspective is very interesting: “The vine of which we are all branches is rooted in the earth which must be cared for... The power of the Holy Spirit is in the microorganisms that degrade our wastes... Keep the same lifestyle but cycle your waste and water. Grow fruits and vegetables instead of ornamental flowers. Under the shade of trees even the hottest days are bearable. If we keep removing the tree cover and keep on putting buildings and keep on putting air conditioners and use fossil fuels for power, climate change will always be a problem.”

“...Everybody is saying the world is in recession. The recession is because we want the olive oil that comes from Europe, we want to sell coconut oil in America and advertise its benefits there and we'll advertise the benefits of olive oil in India. For anything fancy to sell, it has to be first harvested, then packaged, transported,

delivered, and bought and that is what we are educated for. Stuff has to go into a factory, it has to go into a machine, it has to be advertised and a whole chain of useless activity has to be taken care of along the way. And all this requires power and all that requires carbon dioxide. Climate change can be wiped out overnight if people come forward and do their bit."

"The broken community must come together. Start community farming, share recipes, exchange fruits and vegetables instead of money with one another. With such a barter system, you don't need to pay taxes and it's easier to become rich because you don't need as much money. Growing your own food will keep you connected with nature and is a novel way to keep fit. People need to put their apathy and laziness aside, stop opposing for a 101 reasons and start co-operating."

Garbage Concern Welfare Society and 3S Envo - Charkop

Dr Francin Pinto

Founder-Chairperson, Garbage Concern Welfare Society
Managing Director, 3S Envo Projects Pvt Ltd

Francin has a PhD in sustainable development and is a former zoology lecturer who taught global warming, climate change, environment and pollution in college. Academically, these topics are vast and often, children are not able to understand that small changes by several individuals can create a bigger impact. Francin credits her grounding in zoology in understanding that all of us are part of a big web and that there's a big connect between every living thing. Whatever one person does affects the whole, everyone is responsible in their own way. It is this sense of responsibility that drives her work.

"There's no better place than India, India has everything- soil, climate and most importantly we have the human resource. Our human resource is our biggest strength," Francin says. "Our ancestors were good farmers, they knew about the soil, bacteria - we forgot about it and started living in boxes like this. Still it's not too late, it's not the end. There's enough garbage in India to make India self-sufficient because of our population. It's not the population which is the problem; it's the cultures that are wasteful...Still, at home the *kabadiwala* must be coming to take papers, we recycle our clothes, we donate, we do a lot of things that start with us. Don't blame the neighbours - nobody is bad. I have to change my attitude. I do my good, the rest will follow." Armed with the constant support and blessings of her family, Francin founded the NGO Garbage Concern Welfare Society with the motto '*changing indifference into action*' in 2005 and the company 3S Envo Projects Pvt Ltd in May 2006.

In the first year, the NGO was dedicated to creating awareness. Francin worked with twelve schools and implemented bucket composting in three of them. Initially, for a couple of years, Garbage Concern did only vermicomposting. But Francin realised that earthworms are very sensitive. They are also living creatures that humans are confining and they die if not provided with the right environment. And it's not a natural death because they have been put in that place. She began looking for answers on how could composting be done without earthworms and put in time and money for the required research. In 2006, the first project handled by her company was the composting of waste from 600 meals prepared and consumed daily at

Whistling Woods International, a college in Film City. There has been no looking back since.

The company focuses on providing simple, systematic and sustainable (3S) solutions to the environmental problems of corporate clients. It was a new chapter in environment management, at least in Mumbai. Because till then, there were a lot of organisations doing one thing, perhaps either composting or biogas, basically offering just one solution. Francin realised the necessity of understanding the problem in the context of an organisation's unique limitations and budget and space constraints. Only then can several effective solutions for a particular problem be provided. The solutions must necessarily be sustainable. One cannot use expensive technologies which require too much electricity, labour or space. Based on this philosophy, the waste audit became a critical part of the company's package with prestigious clients such as DHL and Mumbai International Airport Pvt Ltd. Corporates also used the waste audit as an opportunity to bring down their carbon footprint.

Waste audits determine the types, sources and magnitude of waste generation, and aid in understanding the whole complex waste management paradigm. Then, tailor-made solutions can be put in place. Along with the systems' suggestions, there even has to be a capacity building of all the stakeholders - right from the head of the organisation to the middle level management and most importantly the housekeeping staff who are actually lifting the garbage bins. All of them have to be made accountable. Francin's approach to capacity building was two-pronged. People learned how to manage and minimise waste at the individual level; and second, to work with each other as a team. It cannot happen that waste management is an enemy territory yet the environment is everybody's. The realisation that waste management is our problem had to come from this capacity building for solutions to be successful in the long-term.

3S Envo handles composting for corporates like KPMG and APM Terminal. Francin developed fibre pits of washing machine-size to be used for composting in housing societies. These are portable, provide ample aeration and are resistant to attack from rodents. The company also provides biogas solutions with two technology partners. Biogas may not necessarily be used for cooking but can be used to run gas lights or heat water. In early 2012, the company bagged the Karjat municipal project, providing centralised management for the 12 to 15 tonnes of waste generated daily by the town's 30,000+ population. 3S began with minimum automation and now the Karjat project is a model in itself. An on-going project is the development of an eco-

park at Tikuji-ni-wadi for children. It will be a knowledge centre where they will learn composting, vermicomposting, bio composting, biogas, how to do tree propagation, what is grafting, plastic recycling, paper recycling, best out of waste, solar electricity, solar distillation - everything set up in a way a child can understand.



Company
and
NGO
brochures



The NGO provides environmental training, waste management and CSR services, and livelihood generation for the urban poor. A key project was 'Resolve' with Vodafone which ran for about eighteen months till 2012, covering about 7000 Vodafone employees in Mumbai. This initiative included community outreach in the slum areas of Marol and Andheri-Sakinaka. As waste management requires labour which the educated lot is not going to come in to do, there is tremendous potential for generating employment for the have-nots, while simultaneously managing the environment and creating new resources. The Green Manager Program has been targeting school dropouts, rag pickers and the unskilled and has trained 3096 people to date across Mumbai, Palghar, Karjat, Latur, Silvassa and Pune in gardening and housekeeping and waste management.

The Green Entrepreneur Program ties up with women self-help groups to empower women to effectively solve local problems. Corporates donated 2000 trees towards the latest initiative spread over two villages in Mahad. Local women will be taught how to care for the trees and generate a monthly income of Rs 5000 from the sale of harvested fruits and vegetables. Francin wants to replicate this eco-model by setting up 500 such *bacchat ghars*. The Green Manager and Green Entrepreneurs Programs are a form of climate justice, she points out, as somebody has created the problem but the problem has become a reason for somebody else to have a life. This is in addition to the environment dividend which cannot be calculated.

Garbage Concern has planted more than one million trees by partnering with different NGOs and corporates. There is also a Green Angels Program targeting the age group 4 to 14 years to bridge the gap in health, sanitation and natural resource management. Francin's key forte is making a lot of people to do small things which have a collective large impact. Her personal success is that 85% of her workforce across 3S Envo and Garbage Concern are school drop outs. She envisages that the company will have 1 lakh people working with her in next ten years by setting up franchisees for fresh graduates in exchange for business.

As for the climate change issue, Francin is of the opinion that the problem has been hyped up by large players with short-term vested interests who lack the right knowledge. She proposes a simple solution. Every individual pledges and plants ten trees per month - imagine how quickly 1.2 billion people doing this would sequester the excess carbon present in the atmosphere. Global warming solved! Sustainable development is achievable, provided everyone puts their hand to the plough. For this to happen, Francin says, "giving starts with me" and quotes, "Love your neighbour as yourself. Who is my neighbour - the environment is my biggest neighbour. With this shift in thinking, there is no distinction between living and non-living. If we love the environment as ourselves, if we all think that we are part of this beautiful environment, will we ever do any harm to it?"

Infant Jesus – Jogeshwari

Fr Felix Rebello

Parish Priest

The soft-spoken Fr Felix conceptualised the weekly e-newsletter Green Earth Movement (GEM) which spreads awareness on environmental issues to a large number of people.

The danger of climate change, Fr Felix believes, is that it isn't immediately apparent. He explains that there are certain struggles people face directly and individually, examples being sickness, poverty, housing problems, price rise, etc. – problems which people are fully aware of. But problems like climate change are not faced so directly despite affecting everyone in the long run. And because the effects of climate change affect people gradually, they may lack awareness of the problem. But Fr Felix feels climate change is really happening and substantiates this by citing its indicators – emergence of new kinds of diseases, increase in pollution-related sicknesses, change of weather patterns, sea water level increase, etc.

Fr Felix realises the adverse impact of climate change is mostly borne by the poor and the marginalised as they do not have the necessary means to face this problem. As a priest and as a Christian, for him following Jesus means being involved in the struggles of the people at large. In a way, his involvement in environmental issues helps the poor and motivates him in doing his bit to work for climate justice. To bring awareness on environmental issues, GEM (Green Earth Movement) e-newsletter is being published since 2009 and emailed to a large number of readers every week, and is also uploaded on the website of Fr Felix's previous parish – www.stfrancisxavierpanvel.in



A GEM e-newsletter

Although Fr Felix has been at Infant Jesus only from June 2015, he has already spearheaded several environmental initiatives in the church and school. A garden is being developed on the church terrace where various vegetables like spinach, radish, *laal bhaaji* (amaranth), etc. are grown in pots. The church kitchen waste is being segregated. The daily food waste is mixed with mud and cow dung from nearby *tabelas* and composted. Thus, not only is wet waste prevented from going to the dumping ground, but the terrace garden also gets free compost which serves as fertiliser!



Terrace garden at Infant Jesus

During various school and/or church programs, the use of throwaway plastic, thermocol plates, glasses, etc. are prohibited. A set of reusable plates and glasses are kept in the church which can be borrowed free of cost by any church group on the sole condition of washing and wiping the cutlery before return. Recently, a series of environment awareness programs have been started for the students of Infant Jesus High school like 'zero garbage'. The students have also begun the segregation at source in each classroom. Recyclable items like waste papers are sold to scrap dealers. This year, during Diwali, there was a Green Diwali campaign. Students were encouraged not to burst the crackers, and they were asked to donate the money saved from the crackers to the poor students' fund. Students and parents responded well for this green initiative.

Another innovative project undertaken by Infant Jesus church lately is the SCC Wise Eco Kids Clubs. Taking the advantage of the SCC structure of twenty to fifty families, the Kids Eco Clubs were launched in each of the SCCs. Children, irrespective of

caste and creed, are invited to join the Eco Clubs. Every month, kids have programs connected with environmental awareness in their respective areas facilitated by the SCC animators. For the month of December, the Eco Kids project was 'Best out of Waste'.



Children involved in Eco Club activities

“If we want to live a happy and healthy life, each one of us must do our bit to protect the environment. Each one of us needs to keep reflecting on as to what kind of earth will I be handing over to the future generations. We need to live simple life content with possessing minimum things which are really necessary to live a good and comfortable life and avoid luxuries which can be a burden on environment.”- is Fr Felix’s heartfelt conviction.

Sarvodaya - Goregaon

Sr Meenal Rodrigues

Administrator

With inputs from Sarvodaya staff

Sarvodaya - Centre for Capacity Building promotes awareness of social issues, development of skills and knowledge of best practices in the social sector.

Sr Meenal recollects the old days when the weather was pleasant and there was no heat. Now, however, there is indiscriminate deforestation and the heat is increasing day by day. There are buildings in place of jungles, weather changes, pollution and health implications like asthma and cancer, and unchecked environmental destruction. One person cannot control pollution but even small actions can definitely contribute to environmental protection.

“We don’t want to destroy nature,” Sr Meenal states empathetically, “We need the oxygen and clean air. For this we have to stop cutting the trees. In the convents and in our homes, we encourage others to plant more trees.”

At Sarvodaya, Sr Meenal forbids burning of fallen leaves. Instead the dried leaves and food waste are loaded into bins, mixed with sawdust and composted. The bins are turned twice daily and the finished compost is used on the premises. Earlier a helper used to get the required sawdust from Vasai, but since that person left, there have been problems sourcing sawdust. There are only six people staying at the centre so the bins take time to fill. The compost takes frustratingly longer to form, especially during the monsoon. The staff has not given up though, and are on the lookout for a solution to the sawdust problem.



Compost bins at Sarvodaya

GreenLine - Matunga

Fr Savio Silveira, SDB

Director

GreenLine is a Don Bosco environmental organisation founded on 4th October 2010. Its tagline is *Greener People... Greener World*, and Fr Savio is quick to state that the work he is doing is largely through GreenLine.

Citing this year's monsoon as an example, Fr Savio identifies erratic seasons as a very clear, visible indicator of climate change. Despite it being a key issue however, he is against narrowing down of the entire environmental discourse to climate change. This is because climate change is an abstract topic whose veracity is doubted by the general populace. Rather, GreenLine's whole approach is engaging them in local issues - talking only about climate change is a hindrance as people may not be directly impacted. Instead, the emphasis is on well-being so that the public can immediately get a sense of the gravity of environmental issues.

As Fr Savio puts it, "Ultimately, all of us are selfish. We are interested in personal well-being and the mess that we are seeing around us is impacting our well-being. If we just look around at our own city, forget about looking at the whole world, we are already seeing the impacts of the lack of care that we have for the environment. If the whole area is full of garbage, my well-being is being affected. If I'm drinking polluted water, breathing this air with all these toxins, obviously my well-being is being affected. I think that any sensible human being would say this is not the way I want it to be and therefore, I have to do something about it. I don't think you need any big motivation and if a person is fine with things being the way they are, I would feel something is wrong with that person. The mess around us is because of the unfortunate mentality that we have - people have lost the sense of the environment. So the first thing that we need to do is to change people's mentalities."

All GreenLine programs are thus about people and changing people. There is no pet topic such as conservation or recycling, even though these and many other issues are taken up. Rather, the aim is to involve people by creating in them a sense of ownership of the environment. Accordingly, GreenLine runs three main age-based programs: Green Schools Campaign for kids, Green Lead for youth and Green Citizens Initiative for older people.

The Green Schools Campaign is already in its sixth year. GreenLine takes up a theme for an entire year with fifty participating city schools. The theme for 2015, 'Fauna Watch', has three main objectives – making students aware of the fauna present even in the concretised mass which is Mumbai city, documenting the fauna present in the students' localities, and understanding the threats to the city's fauna and how these threats can be lessened. The Green Schools Campaign has encouraged involvement even in larger environmental issues. For example, students of Auxilium were present at the coastal road protest held on Independence Day this year and featured in the Hindustan Times.

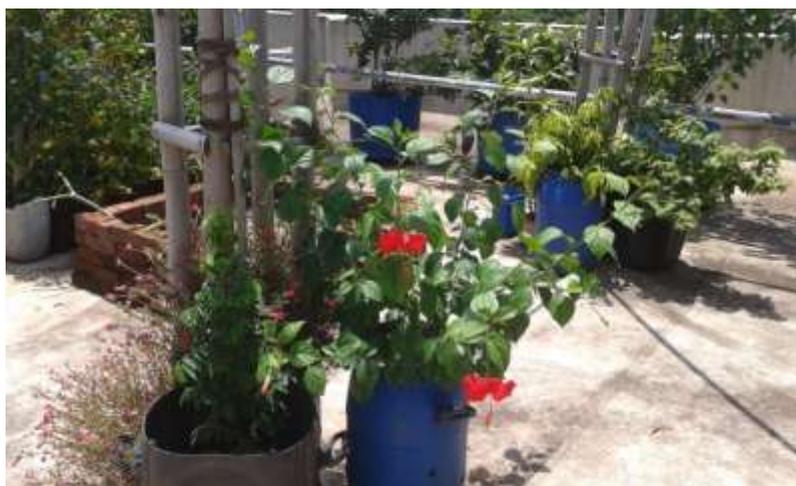
GreenLine invites college students and young working professionals in the age group of eighteen to thirty from the Mumbai Metropolitan Region to work as volunteers in the Green Lead program. The volunteers are directly involved in on-going issues in the city and participate in campaigns run by other NGOs. They also benefit by training workshops conducted by GreenLine to build up their skills and capacities. Green Lead volunteers were involved in the 'Free the Tree' campaign launched in August 2015 by the Aarey Conservation Group. Many of the trees on the city's avenues and footpaths are dying because of the concrete choking them. The National Green Tribunal has ruled that each tree should have around it a space of 1×1×1 ft, which the BMC hasn't provided for. As part of the 'Free the Tree' campaign, people were exhorted to take photographs of such trees and give their locations. The aim was to have a collated dossier of at least 1000 trees which need to be freed sent to the concerned BMC departments by this December. Green Lead is also working with the recently-formed Yeoor Environment Society on various issues connected with the Yeoor Hills and forest.

The current target of the Green Citizens Initiative is the e-waste problem – Mumbai's whopping 22,000 tonnes of electronic waste generated annually. Most of this waste is disposed of unscientifically despite regulations requiring proper e-waste disposal through licensed handlers only. The novel 'e4E' campaign was launched to create awareness about the hazards of improper e-waste disposal and facilitate correct disposal. 'e4E' stands for e-waste for Environmental conservation. GreenLine has tied up with the company Recycle Karo to pick up the e-waste collected during drives conducted all over the city. The proceeds from the e-waste go to the Sahyadri Nisarga Mitra NGO for their Vulture Conservation Project. As scavengers, vultures play an important role in the ecosystem by preventing the spread of diseases but their ugly appearance makes it difficult to find funds for conservation, and the 'e4E' drive will support conservation steps such as mapping vulture nesting locations and protecting vulture colonies along the Konkan coastline.



An 'e4E' drive

For the previous two years, the Green Citizens Initiative ran 'Mumbai Green Up' between World Environment Day on June 5 and Independence Day on August 15. In the first year 5000 saplings were distributed for plantation, but GreenLine could not evaluate how many of them were actually planted. So, in the next year, GreenLine announced Mumbai Green Up with a caveat - participants had to inform where the sapling would be planted while collecting the sapling. There was a drastic drop with only 500 saplings getting distributed, but hopefully all of them were planted and are thriving. The Green Citizens Initiative also collaborates with Urban Leaves for rooftop gardens - and the terrace of the Don Bosco Provincial House in Matunga features a robust rooftop garden along with solar panels!



Part of terrace garden at Don Bosco Provincial House

In context of COP21 - the Paris UN Climate Conference, GreenLine is involved in a social media campaign titled 'United Kids for Climate Action'. Since November 14, a video message from children to the leaders at the conference is being uploaded daily on various social media platforms – Facebook, Twitter, YouTube and WhatsApp. 'United Kids for Climate Action' videos were uploaded till December 11, 2015 and can be viewed on: www.youtube.com/channel/UCQFVSEcE6gqNZFphPx4B4GYQ

HINDUSTAN TIMES, MUMBAI
MONDAY, NOVEMBER 23, 2015

Students send message to world leaders ahead of UN climate talks

Badri Chatterjee

badri.chatterjee@hindustantimes.com

MUMBAI: In the run up to the 2015 United Nations Climate Change Conference in Paris, a city-based non-governmental organisation (NGO) has been uploading video messages from school students in Mumbai to world leaders likely to attend the meet.

The 30-second long videos contain a message from students and their personal efforts in saving the environment.

From November 14 (Children's Day) onwards, NGO GreenLine has been uploading one video every day on the video sharing website, YouTube as part of its campaign, United Kids for Climate Action. Until now, nine videos have been uploaded and the NGO will continue to collect videos messages till December 16.

"The aim of this social media campaign is to create awareness about the UN Climate Conference and also to build citizens involvement in climate action," said Sorio Silveira, director, GreenLine adding,

"The Paris conference will impact everyone's life especially the future generation as what is happening today will affect the children when they grow up. We thought it was important to depict the messages from those children to the world leaders regarding what is being decided



• A video grab of the messages uploaded by the NGO GreenLine on YouTube as part of its campaign. HT PHOTO

by them."

Under UN's Climate Change Conference in Paris, more than 190 nations, including India would meet in Paris for the two-day summit starting November 30 to create a new global agreement on climate change. The meet aims to reduce global greenhouse gas emissions and its impact on the. Global negotiations have been carried out for 20 years now with the last conference held at Copenhagen, Denmark in 2009.

Thirteen-year-old Sara Earnik, in her video requested world leaders to take good decisions towards minimizing the use of fossil fuels and focusing on the use of alternative sources of clean energy. "I commit to

reduce the carbon footprint by using eco-friendly products. As students, we all should be committed to saving the environment as it's only one-earth that we have," said the Class ten student from Convent Girls' High School in Prabhadevi.

Edina Mascarenhas, a teacher from the school, said, "We encourage our students to voice their opinion on important matters such as environmental change. We are confident that the world leaders will be attentive to the voice of our children."

Along with students, environmentalists, authors and nature lovers have also been roped in these videos that will be uploaded closer to the conference in Paris.

Newspaper article on the United Kids for Climate Action campaign

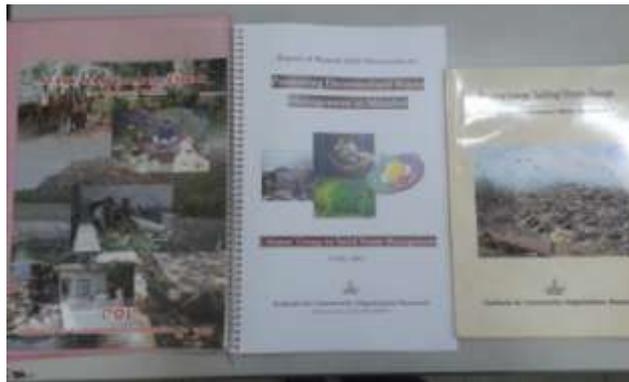
Fr Savio concurs with Pope's remark in *Laudato Si'* that environmental initiatives cannot just be a sum total of individual good works but has to be carried out by a network of communities. Fr Savio believes that the environment issue must be mainstreamed in our parishes and everywhere on similar lines as the community outreach centres mandated by the archdiocese in every parish, and not just left to interested individuals doing small things. His message is very simple, just two words – "Get involved".

Institute for Community Organisation Research - Goregaon

Deepika Singh

Co-ordinator

The Institute for Community Organisation Research (ICOR) is a non-profit organisation. It primarily aims to come up with a body of knowledge indigenous to India and its culture that will enable the empowerment of grassroots workers/ non-governmental organisations/ community-based organisations in the field of human development. ICOR's recent work has been directed at various environmental issues faced by communities.



Various ICOR publications

Picture a peaceful village nestled near the foothills of a mountain range. Rainwater streams pass through the village during monsoons and its ponds are teeming with fish. A few wells supply sufficient water for the farms and the close-knit inhabitants. This was Hattikhedi village in Ajmer district near the Aravallis around forty years ago where Deepika hails from. Over the years, the ponds and wells have dried up. Rains are scarce. There is a severe lack of drinking water, and a loss of community sustainability. Deepika has experienced drastic environmental change and deduced that poverty, overgrazing by livestock, establishment and dependence on private tube wells causing cessation of community care for the ponds and the replacement of indigenous trees by water-intensive fuelwood species to have exacerbated the situation.

Deepika believes that traditional knowledge fosters environmental consciousness, but has been neglected in lieu of technology and consumerist lifestyles. She advocates turning back to nature and living a simple lifestyle, after all, it is the Earth

which is providing all our resources. She likens nature to a bank which we have been repeatedly withdrawing from without depositing; there are bound to be problems. She experiences tranquillity and good vibes when she is in commune with nature, never bad vibes like with certain people! Deepika's first exposure to climate change as a technical topic was in 2002 when she joined ICOR. The seminars, conferences discourses and sessions were too complex for the former activist and she worked hard to get a thorough understanding of the issue. Since then she has been involved in a plethora of activities, all to bring people to work together on the right track.

Farmers, Deepika says, were the biggest environmentalists who have been driven to only consider yield. She researched the impacts of climate change on agriculture and fisheries. She was involved in a project promoting sustainable agriculture through use of native seeds which have better climatic adaptability and pest/ disease-resistance than promoted hybrid varieties. She is of the opinion that the rural poor should be paid for their traditional efforts and urban population should be made more accountable, as urban areas are responsible for higher greenhouse gas emissions than rural folk. ICOR started extensive work on solid waste management, and Deepika is responsible for the digital documentation of solid waste best practices.



Deepika addressing an ICOR conference

From 2008, she has been working with college youth in sessions on environmental awareness and climate change issues. Deepika designed and has been handling Climate Change Education Program which is part of the Social Responsibility/ Outreach Program for students of St Andrew's College in Bandra. She has also mentored student interns from Loyola College and SNDT in sustainable development with an emphasis on waste management. She also organised a Youth Forum as a side event at an Indian regional public hearing before the Copenhagen Conference.

In collaboration with Samuchit Enviro Tech Pvt Ltd, Deepika developed the Green Audit (GA) tool for educational institutes. The green audit reviews management of energy, water, waste, materials, travel and transport, ecology, knowledge, pollution and disaster preparedness of the institute. The focus is on capturing best practices and initiating good practices while engaging with faculty. The next step for ICOR is to be part of the execution of the recommendations of the GA together with the audited institute. Deepika is also aiming to audit a municipal ward or village panchayat. Under the Archdiocesan Office for Environment, she also conducts sessions on care for creation, climate change and lifestyle for confirmation students and laity.

“Give nature importance in everything, be it spirituality or social life,” she advises, “If we want prosperity and to develop our world, we have to be conscious of nature and not be alienated from it as nature is an integral part of our human existence. We cannot treat nature as something different from us. The more we destroy nature, the more we are destroying our own self. Keep nature as a priority in our development and lifestyle.”

St Anne - Mazagaon

Fr Vincent Vaz, SJ

Parish Priest

The account of the dynamic Fr Vincent is presented in his own words:

“It all began at the inauguration of National Eucharistic Congress last year. I was quite impressed by our Catholic Laity living their faith in the context of various social needs. St. Anne's itself being a parish that has the Byculla Jail, the Red Light Area, a number of aged homes and Nair and JJ hospitals, we are quite involved with these social issues. It is with this concern and sandwiched between our two Schools - St. Mary's that I thought we could handle the question of waste on our campus. Accordingly I contacted Mr Christopher of the DIRT - NGO and decided to begin this project - NO WASTE AT MARY'S.

The procedure is simple - the wet food waste of the School and of the Jesuit Community is collected daily and put into perforated plastic drums. The dried leaves are swept and shredded into sawdust and mixed with the wet waste. The drums require to be turned three times twice a day and within a month we have the compost.

To demonstrate the use of this compost we have created a small garden of vegetable and fruit. The first attempt was a failure, but now it seems to be taking shape and the compost enriches the soil. Since the material used is waste, the compost is freely given. God sends generous angels to meet other costs.

I call it the Garden of Eden, since it really is a simple wonder of God.”



*Fr Vincent
in the terrace
garden with
finished
compost
which is then
packed in
paper bags*



Although there is no water shortage in Mazagaon area, the water-saving drip irrigation technique is used to water garden plants. The parish may not have experienced any ecological problems, but is still taking steps to protect the environment.
