FROM CRADLE TO CRADLE BUILDING FOR RESPONSIBLE CONSUMPTION
This publication documents the three-week Auroville Green Practices 3H Summer School 2014 ‘From Cradle to Cradle; Building for Responsible Consumption’. The publication was prepared in a collaborative way by participating students and facilitators. Those were: Aakanksha Jain, Abhimanyu Goel, Alessandro Arrigoni, Ambra Sehgesio, Geetanjali, Giulia Dessogus, Harman Aggarwal, Karishma Advani, Keshav Goyal, Pritish Srinivasan, Rahul Mor, Rajat Chauhan, Sakhi Arora, Satyaprita Gaekwad, Shalabh Gupta, Shreya Jain, Valerio Fogliati, Valeria Cavinato, Vatsala Khandelwal, Akshay Kundu, Shekhar Dahiya, Pankhuri Kanwar.
Foreword

Where else other than in Auroville would one get the heady mix of spirituality and practice. Martin Scherfler and his team have put together this sensible mix to train the future ecological sensibility. Yoga, discussions, walks and theatre make for an invigorating prelude to understanding Cradle to Cradle philosophy. McDonough and Braungart in Cradle to Cradle have looked at the aspect of resource consumption and waste streams and have built up a very rational approach which is very much measurable thereby justifying the concept and its relevance in the current resource constrained society.

Cradle to Cradle is a clinical approach and much needed, but at AGP when it gets combined with discussions on spirituality, talks with senior members of the community all in the hallowed environs of Auroville it certainly makes for a much rounded understanding. Suhasini’s hands on project is a very important one not only because of it uses bamboo but also because it tries to work at providing a much needed designed solution to our vendors to have a light, comfortable, safe and cheap stand so that they can display their goods in an effective manner.

The need of hour is more and more workshops of this kind to break the wall of apathy and helplessness and create a positive energy.

Chitra Vishwanath
Principal Architect and Managing Director.
Biome Environmental Solutions Private Limited.

Humans are fragile creatures and need sheltering and protection from the climate, hence we need to build. It is one of our very basic needs for survival. As the number of living humans on Earth has grown to an estimated number of 7.062 billion (by the United States Census Bureau) a lot is hence built. We are currently experiencing exponentially growth and a rapid global urbanization resulting in the growth of city and town populations. In short we are many, we build a lot and fast and we build more and more alike regardless of climate and cultural heritage. We globally face limited resources on the one hand and basic human as well as comfort needs on the other hand. A pure linear development is due to the scarcity of our global resources no longer feasible. In our modern times conventional planning is in favors of the technical solutions e.g. from intelligent materials to reducing the energy consumption. Social leadership isn’t yet seen as part of the solution and hence normally put even in a separate department in our academic education. Already today a lot of technical sustainable solutions for a sustainable shift are at hand, but in reality often not used, either for its normally high installation costs or the lack of knowledge (existence and/or application).

Naturally as professional architects we are involved in the building and planning process and the deep care for the creation of livable human spaces in balance with the environment and cultural aspects had been since always the core of our profession. How can we face today’s extreme consumption knowing about the limits of our planets resources? How can we stand for our values in our personal life and live our profession in a responsible way. The question isn’t about good or bad, but how these adverse impacts on us as designers, creators, architects can be shifted to form a circular rather a linear line of process in order to form regenerative livable spaces. In contrast to the term sustainability “being responsible” holds the key to all of us, as it is “in the doing”, hence active and not passive. We as architects are involved actively in the building up process of our world and we need to become aware of our responsibility beyond the interests of the multiple parties involved in the building business. Be responsible for yourself and for what you do and how you design – act as global aware citizen’s from above and foremost from within. I hope after the 3H program of the summer school in Auroville the change of your perspective will influence the way you stand and design in this world, clearly making it a better place to be. Personally I am longing to see the impact you and your design will generate in the world from now on.

Stefanie B. Overbeck,
DipAA Architect,
Co-founder of zoararchitecture
Acknowledgement

3H Summer School is the result of the dedicated work of Arunima Dasgupta, Balu Ramalingam, Balu Sundaram, Catherine Vallet, Martin Scherfler, Shefali Mendon, Suhasini Ayer-Guigan, Vimal Bhojraj, and Walter van Assche.

Special thanks goes to Kalsang from the Pavilion for Tibetan Culture for her true hospitality that made all participants feeling at home. Another special thanks to Nicole from the Auroville Visitors Centre for providing us with the opportunity to build the kiosk within the premises of the Auroville Visitors Centre.

Many thanks to the countless Auroville resource persons and facilitators that contributed to the successful completion of this program with their valuable inputs and guidance.

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List of contributing resource persons & facilitators
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Alan Herbert, Editor, Auroville Today
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“The future belongs to those who understand that doing more with less is compassionate, prosperous, and enduring, and thus more intelligent, even competitive.”

- Paul Hawken
Introduction

The 3H Summer School program is an initiative using Auroville and its outstanding experience in human unity & sustainable living as a platform for the learning and personal growth of students from around the world.

The program is based on the 3H approach that nurtures hands (skills), head (competencies) and heart (inner capacities) of all participants. The 3H Summer School 2014 served as an experimental educational laboratory, connecting theory and application with core human values such as justice, compassion and dignity around the lead theme of regenerative design, closed loop systems and responsible consumption.

Participants came from various Indian and foreign colleges and each one brought his or her specific strengths and skills into the workshop, contributing to a great and transformational learning experience, which we hope they will always carry in good memories with them.

Martin Scherfler
Co-Founder
Auroville Consulting

About Auroville

Auroville is a growing international township near Puducherry on the Coromandel Coast in India. Spread over more than 4000 acres for an intended population of 50,000 residents, it is an inspiring model for sustainable practices and ecologically responsible living. Founded in 1968, Auroville is based on the vision of The Mother from the Sri Aurobindo Ashram and is endorsed by UNESCO and Government of India as an ongoing experiment in human unity. The Auroville Foundation was established in 1988 by an act of parliament of the Government of India to govern its affairs. Over the years, Auroville has won international acclaim for its efforts in social and environmental sustainability. The current population of Auroville Township is over 2200 residents from about 45 nations.
I can't understand why people are frightened of new ideas. I'm frightened of the old ones.
- John cage (US composer, 1912-92)
At present, industry and lifestyle choices follow a predominant cradle to grave design approach where raw materials are sourced, processed into products and then discarded when their life span ends. We live on a finite planet and everything we use and throw remains with us - there is no away. The awareness of the life cycle of a product is gradually becoming public interest, which has led to the development of concepts like regenerative development and closed loop systems.

The Cradle to Cradle design approach founded by William McDonough and Michael Braungart brings forth a practical and rather transformative approach to the design and manufacturing processes of products. The main principles are established by drawing inspiration from interdependent and diverse cycles in nature. It emphasizes the importance of designing for disassembly so as to allow materials to circulate within a technical or biological nutrient cycle without compromising quality of the product or health of the user – Waste=Food. This approach also highlights the importance of striving to enrich nature through the manufacturing processes of a product instead of being carbon neutral.
Any product or service consumed has a hidden price tag, an invisible, not accounted for impacts during its life cycle, from distraction to manufacturing, to transportation and distribution, to disposal. Those impacts are impacts on the eco system and its services such as air, water, soil, biodiversity, or they are impacts on the health and economic opportunities of the humans that manufacture or consume these products. Hidden price tags are externalities of the economic system or to put it differently they are not accounted for costs. Costs that are transferred by the producers and consumers onto communities or costs that are transferred onto the environment.

Birth control pills, as an example, contain synthetic form of estrogen, through the sewage system some of these estrogen gets into water bodies such as lakes and rivers. In a Canadian lake this resulted in the feminization of male minnows, a local fish. Within three years the minnows had virtually disappeared, and the lake trout that feed on them had declined by close to 30 percent.

A common ingredient in sunscreen prime the growth of a virus in the algae that live inside coral reefs and turn the coral reef into bleached skeleton. Researchers estimate that between 4,000 and 6,000 metric tons of sunscreen washes off swimmers each year worldwide, threatening to turn about 20 percent of coral reefs into bleached skeletons.

It seems that as human species we are not sufficiently equip to detect and solve these kinds of environmental issues even though on the long run our survival may depend on it. The human brain hasn’t had a hardware upgrade in about 100,000 years. The amygdala is the center of the brain that controls responses to threats with the typical fight or flight reactions. Evolutionary this response was enough when men was dealing with the immediate perils in nature such as wild animals. Most of us are still acting out of the ancient fight-or-flight response. But in today’s world many of the perils we are facing a sub-threshold such as polluted water bodies or global warming. Our brain excels at handling threats in the moment but falters at managing those we face on the ecological front: these are dangers that come gradually, or at the microscopic level, or globally.

The connection between what we buy and do and the resulting adverse impacts remains hidden from us. Even as some of these consequences become increasingly server and threatens our very existence. Our survival as a human species may depend on our capacity to make visible these hidden threats. We need a deep understanding of the countless ways man-made systems interact with natural ones as this may eventually equip us to build systems that positively contribute to environmental and human health, systems that are working with closed loops and that are regenerating nature and cultures. Systems that are ecologically intelligent. To tap into this intelligence we need to get beyond the thinking that puts mankind outside nature. We need to discover the ways this intimate interconnectedness operates and to learn how to do better. Responsible Consumption relies on a radical transparency, a transparency that discloses the impact of a product or services on the planted and human health at each stage in its lifecycle. Responsible Consumption also requires empathy with all living beings and a motivation to act intelligently based on the best information available for the good of all sentient beings and ecological support systems.

Responsible Consumption
Participants
Profiles & Learning

“To change something, build a new model that makes the existing model obsolete.”
Buckminster Fuller
My name is Balu Ramalingam, and I was born and brought up in Auroville. I have done my MBA at Pondicherry University. I stand for my own rights and beliefs and I would never give up my right of living in any circumstance. My personal way of expressing myself is to interact with people. My professional skills include organizing workshops in and around Auroville for large groups. Ensuring the participants warm hospitality and managing the logistics throughout their stay are my primary objectives. The best part of the program is the satisfaction in seeing that everything is running smoothly without any problems or injuries. My learnings from this workshop are many. But one important lesson is that I have to still find a way to bring the participants to the work place on time and change myself into being a little firm so as to maintain a form of discipline. The one change I have noticed in this workshop is that the stress levels were considerably reduced, owing to the fact that I had Shefali alongside me the whole time and this made a whole lot of difference. I would say that there is nothing that I have to do differently.

My name is Shefali. I was born into a culturally diverse environment in Muscat, Oman. Growing up practicing two religions, surrounded mostly by Indians in an Arab country, I developed a distinct understanding of co-existence with people from varied backgrounds. This aspect has further bloomed since my arrival in Auroville. I stand for compassion and self-expression. Professionally, I am a trained architect and classical dancer and express myself creatively and skillfully, by moving out of my comfort zone with perseverance towards growth. I draw inspiration from nature and the people around me through observation, exploration and creation. I have a keen interest in the sustainable building practices and the relationship between building construction and financial systems. Each day of the program has been a learning experience for me especially learning to hold and maintain a balanced space of creative expression, support and discipline, on and off the construction site.

My name is Karishma Advani; I am originally from New Delhi. I stand for courage, beauty and truthfulness. I have always been a very shy and introvert person. I like to keep to myself. I am passionate about helping people so that they get justice and equality. I like to step outside my comfort zone to help others. I like to try new and different things in life. My unique professional skills include my developing skills in architecture and presentation skills. I also learnt many things about sustainability and about living a sustainable life. I have been able to overcome my fear of speaking in front of a group of people and I also feel I have clarity in thought. I have learnt many things about waste management and other techniques that could lead to a sustainable life also to not want more from the environment. This programme has given me knowledge about construction using bamboo as a building material. Living in Auroville has changed my perspective in life and has been a life time experience for me which cannot be explained in words. It has inspired me in many different ways and I wish to help in creating a sustainable living.

My name is Akshay Kundu and I am from Kurukshetra, Haryana. I am doing B.Arch from Chitkara School of Planning and Architecture, Chandigarh. I have completed the first three years of my degree and 2 more to go. As an individual, I stand for perfection, creativity and unending learning. I come from a lower middle class family, where no one is highly educated and where funds are always an issue but I was given all the possible opportunities by my parents to explore each and everything, whatever I desire. I personally find art and architecture both, as the best mediums for being expressive and that's why my professional skills include anatomy sketching, architectural designing and logo designing. According to me, the technical sessions were the best part as they were quite informational. I learned what my inner strengths are and how to deal with them. I also learnt that our fears are the worst part of us and if we let them go, life will be awesome. And I already can feel that change in myself. I don't feel nervous anymore confronting large audiences or new people. I feel much more confident.
My name is Alessandro Arrigoni and I come from Milan in Italy. I am an environmental engineer and right now I am a PhD candidate in materials engineering at Politecnico di Milano. I stand for justice and freedom. I am passionate about the environment and that is why I chose a faculty that would have allowed me to make something useful to face this environmental crisis. My professional skills are the result of studies in the fields of environment restoration and sustainability. The best part of the program so far was the work on site. To work together with people who have lot of experience with the materials they are using was very useful for my personal growth. To see the construction (almost) completed helped me also to increase the self-confidence.

My name is Ambra Seghesio, I am Italian and I have a Master Degree in Architecture from the Polytechnic of Turin. I stand for creativity, courage and independence. These three things are essential for the carrier of an architect. Courage and creativity are necessaries to improve our knowledge, culture and references for the design, while independence is important because architects should move around the World to get experiences and get to know cultures different from theirs. During my academic years and professional experiences I have developed an interest in wood used as a building material, so I would like to be an Architect specializing on the wooden structures and sustainable architecture. Unfortunately, during my university studies I never got a chance to learn about Bamboo as a building material, so thanks to this Summer School I learnt some elements of this subject and I had the opportunity to personally build a real structure.

My name is Pankhuri, I stand for creativity, independence, perfection and optimism. I belong to a small city where life is still at ease and an even smaller family. I have travelled to various places and have learnt the importance of relations and interdependence in need. Relations are a close knit grid essential for growth. As an individual I enjoy the appreciation of my accolades and press strongly on impactful and meaningful design. I believe that every design is an untold story that should reach out to people. The program was an insightful introduction to cradle to cradle approach, such that we introduce a closed loop system in our consumption cycle. I learnt various essentials that I intend to introduce into my life: Collaboration over competition; environmentalism and commerce should be harmonised, and that our actions are driven by fears, our strengths should define our actions instead. I noticed the waste disposal and distribution and how it is the core of a closed loop system. I will strive to create thought through products such that I pay close attention to its manufacturing with respect to its final disposal. At the same time introduce the essence of design, nature in my projects.

My name is Valeria Cavinato and I’m from Rome, Italy, where I’ve completed my studies in Architecture. I stand for responsibility, curiosity and compassion. Even before choosing architecture I always felt more free to express myself in sketches. My personal way to convey thoughts or feelings is not only through drawings but also through a good chat here and there. I’ve always preferred to use the architecture as a medium to convey a message and to think about issues bigger than a single construction project. The best part of the program was the on-site construction experience and the project to design. I appreciated a lot the interaction of different subjects we had, such as the movies, the classes and the discussions. I would have liked to have a schedule organized in order to have not more free time, but time to understand this unique place, Auroville. I didn’t learn anything new about myself but I improved on how to clearly convey my ideas in words to other people. I will keep trying to work for the issues I feel quite important, such as sustainability, cooperation, deep reflections on every small choice that can change the life of the planet and people.
My name is Geetanjali and I am from Chandigarh. I study Architecture and I just completed my second year. I stand for determination, perfection and love as caring. I am an introvert but sometimes I like to have discussions. From the start I was always seeking peace whether in my life or in the world and help others as much as I can. I don’t really have a professional skill but I am quite determined about whatever I do.

The best part about the program is that it shows the reality, living a life away from home and learning what’s actually happening in the world and the efforts made to save it. I definitely learnt a lot about how things work in the world, the corporations and all the lies we are being told. But as a student of architecture I learnt a lot about materials and how I can build sustainably. Changes will be there definitely once I go back home and do what I learnt here and I hope that I can bring some changes in my designs as well as my personal life, trying to live sustainably.

My name is Harman Aggarwal. I am pursuing architecture from Chandigarh College of Architecture, currently I am in 3rd year. I stand for simplicity, honesty, happiness and creativity. I find writing the best way to express myself, with no curbs and checks. My unique professional skills include proficiency in architectural softwares and graphic designs. My other interests include calligraphic writing, sketching and crafts.

The program helped me recognise my inner strengths like justice, equality and honesty. It helped me polish my capacity of being more extrovert and be able to speak my mind much more clearly. With this program, I feel I am more confident, open-minded and unswerving. With this program, I feel I am more confident, open-minded and unswerving. Now on, I will work sincerely towards having a better ethnicity in the best possible way with all that I learnt in this program. Also, my projects in architecture will be a lot more sustainable and righteous towards the environment.

My name is Giulia Desogus, I am graduate student in Architecture Heritage Preservation and Enhancement with the highest evaluation (Master of Architecture) of the Polytechnic of Turin in Italy. I love working with multicultural people and I consider the teamwork a possibility to meet new people and to exchange ideas. I stand for respect, culture and intelligence. These three words are the foundation of my education, my actions and my thoughts. I express myself through drawing (a characteristic passed on by my father). I am able to perform well in my studies and really passionate about urban historical research and hope to develop more and more passion each day. I found the summer school very intense and despite not having space to think I was able to perceive different things. Talking to several people and colleagues, I have learned different ways of living and working. I can share the things that I learned in two: the subjects closely related to the school and life experiences.

My name is Valerio Fogliati, I am a former student of Politecnico of Turin in Italy. I graduated in Architecture “Restoration and Enhancement of the Architectural and Environmental Heritage” in December 2013 with a thesis titled: “Red Hook, New York. Timber in the City Urban Design and Project of a suspended tall wood building. For the purposes of my research I moved to New York to observe different architectural design methods and to study the way in which the contemporary city has developed. The main subject of the thesis was the study of the urban suburbs and the possible technological uses of timber in a contemporary city.

In addition, I have developed a great interest in traditions and cultures different from the Italian one. Furthermore, I like the teamwork because I believe it’s a great opportunity to exchange of views with others people and it’s opportunity to work with people with different competence. I’m convinced these are the best ways to grow.
My name is Aakanksha Jain and I belong to a metropolitan city, Meerut near New Delhi. I am a recent graduate in Architecture from Apeejay School of Architecture and Planning, Greater Noida. I stand for creativity, happiness, prosperity and determination. I have always been interested in design it as a medium of expression through sketching, painting and photography. My unique professional skills include my conceptual designing ability, software skills and photography. The 3H Summer School at Auroville was a great experience and helped me have a better insight at my own capabilities. Now I am able to express myself more confidently. Working with bamboo at site helped me realized the value of teamwork and the also different characteristics of bamboo as a construction material. Living in Auroville, interacting with different people from diverse backgrounds and their approach to life have really inspired me and changed my perception of healthy and sustainable living. Also, I have realized how architecture can really contribute to a more sustainable lifestyle through collaborating with nature and I would really like to incorporate this approach while designing.

My name is Abhimanyu Goel, I am an architect from New Delhi, India. I stand for honesty and creativity. I strongly believe in human values and inspired by the love in nature for all living things. I love travelling and am always keen on exploring new places, things and meeting different people specially the older ones. My experiences as a student of architecture include designing of spaces philosophically through sketching, graphics and 3d model making. Best parts of the 3H Summer School were the challenges we were given at every point of time. I improved my ability to express my thoughts in a better way than before. This intense course was like a gymnasium for my mind and inner strength, which increased as we were working out on them daily. I learnt teamwork with the other technical persons and workers on site and how to be precise on technicalities when it comes to practical building of structure. I am in love with my sweat these days, as it feels awesome when air strikes on you when you are drenched. I am looking forward to change my ideologies, which were not ethical for the environment and work to bring a change for a better living with respect to sustainability.

My name is Vatsala Khandelwal. I am originally from Mirzapur, a small town near Varanasi, U.P. I have recently graduated from Apeejay School of Architecture and Planning, Greater Noida. I have been brought up in a small town but had spent a major part of my life at boarding school. I am a curious learner and I open myself to new experiences and like to participate in varied activities. I stand for curiosity, optimism and determination. As far as my professional skills goes I am good at architectural software, designing, analysis and documentation. The best part of the programme was hands on construction and exploring about cradle to cradle design approach. The programme has helped me to broaden my outlook and enhance my thinking capacity as an architect and as a human being. It has given me an opportunity exploring my on-site working skills. As far as my professional skills goes I am good at architectural software, designing, analysis and documentation. The best part of the programme was hands on construction and exploring about cradle to cradle design approach. The programme has helped me to broaden my outlook and enhance my thinking capacity as an architect and as a human being. It has given me an opportunity exploring my on-site working skills. I have improved the way of self-expression in front of a group of people. From the Summer School I take back an approach towards a more sustainable lifestyle, which will also help in developing my professional skills. I would like to choose my further career options accordingly so that I can also be the part of this change.

Shreya Jain  My name is Shreya Jain, I belong to Meerut a city in Uttar Pradesh but now I study in Greater Noida in Accurate Institute of Architecture and Planning. I have just completed my second year. I stand for perfection, happiness, joy and humour. I always had a great interest in structures this helped me in choosing my profession. I have a great interest in painting and sketching. In terms of my inner strength, capacity and skills I have learned that I stand for perfection and happiness. Here I also build my technical skills of construction with bamboo structures, which was the best part of this program. I noticed that now I see myself more comfortable working in groups and learning to live life sustainably.

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My name is Sakhi Arora, I am from Delhi and studying architecture from MBS School of Planning and Architecture from Guru Gobind Singh Indraprastha University. I stand for courage, determination, beauty and a free mind. Since childhood I've stood for what I want and have desired to live in an unbiased society. I've stood against injustice and chauvinism. I love to travel, meet new people, experience new things and anything else, which broadens my spectrum. My unique professional skills are coming up with innovative designs. What I really like about this program is that it not just focuses on technical learning skills but also on the discovery of new strengths and redefining old ones. In terms of inner capacities and skills I learnt that I stand for determination, justice, free mind and creativity. I learnt the importance of sustainable living. I noticed that I've grown more comfortable being with people from different parts of the world, I've grown more confident in terms of expressing myself. Living in a place like Auroville I found myself in a very peaceful state and made me believe that sustainable living is not just an idea but can be moulded into a lifestyle if you have that will.

My name is Rahul Mor, I am from Sonepat, Haryana. I am doing my B.Arch. I completed my 2nd year in June 2014. I stand for freedom, awareness. I am passionate about social issues. My unique professional skills include drafting and designing. The best parts of the program were the leadership sessions and the technical sessions. From these sessions I learned about my inner strength my fear and how to overcome them. I learnt about sustainability and what that could mean in the context of architecture. I learnt how to express myself better. I learnt about the process of working on site. From the Summer School I learnt to live a more meaningful life. I realized that everything we are doing during the program had a motive and purpose. I learnt that every thing, which we are doing, had a purpose and reason to doing that. I learnt that I have to be more passionate about sustainability. In terms of doing something different I will try to create more sustainable designs.

My name is Satyaprita Gaekwad, I am a product design student. Originally from Gujarat, I have been living in Pune for my studies for the past 4 years. I stand for freedom, integrity and equality. I am an artistically inclined person; I have deep interest in painting and other hand skills. My way of expression has more to do with colours and forms. I am used to depict my mood through my paintings and other art mediums such as carpentry, clay modeling and sketching. Personally, the best part of the program was to get the opportunity to experiment Auroville and to understand the meaning and importance of an independent and sustainable community. I also learn about my fears and strengths, the connection between spirituality and science. As a designer, my knowledge towards materials and its handling has improved, and I have understood the importance of local and vernacular techniques which also can be implied into products. I would now focus on developing products in a sustainable manner and on creating design interventions for existing product manufacturing (handicrafts/local arts) and also try to incorporate my personal values into all my upcoming projects.

My name is Shalabh Gupta, I am from Delhi and studying Architecture (B.Arch) from MBS school of planning and architecture in Delhi. I stand for justice, equality and courage. I had a very independent upbringing. I believe that everyone should be treated equally whether they are animals or human beings. I like to know people and try to understand their point of view from their perspective. My unique professional skills are my seriousness & my capability to work hard and to managing my time efficiently. Whatever I do I try to do it with full attention and give my 100 percent in it. The best part of the program was the interaction with different cultures as well as with yourself. I learnt a lot after coming to Auroville. As nature provides us with everything I learnt that we ought to give it back. Also I learnt the importance and necessity to live a sustainable life. And obviously I learned about various environment friendly building materials and working with bamboo. I noticed that I could speak in front of people as the workshop helped me in getting over the stage fear. I realized that I can adapt to different environments.
My name is Shekhar Dahiya and I am from New Delhi. I pursue to be an architect and currently in second year of Sushant School of Art and Architecture, Gurgaon. I prefer expressing myself through words and try to develop the feelings through the work or design I do. I stand for unity, harmony, happiness and awareness/sensitivity towards nature and humanity. My professional skills involve designing sustainably, execution, sketching and painting. The best part of the program so far is to learn new culture, meeting new people thus gaining more confidence and some awareness about the sustainable living. Well about the learning part, Auroville as whole is a life changing experience for me. It taught me how to live for others and not just yourself. I have learned that there is no away (everything comes back), we as architects design for human health, living and not just buildings and do not give up in your truth/don’t lose hope because failure is a part of life. And yeah obviously about bamboo and sustainable development as it’s the part of the workshop. Now I have a clear thought of what I am going to do in future and I would try...
Catherine Vallet

My name is Catherine. Born and raised in a traditional French city near Paris, I studied International Business and Marketing in-between Paris and Madrid. I discovered the Auroville community 8 months ago thanks to an internship. I stand for respect, humility, sharing and curiosity. My studies allowed me to travel and move from place to place during these past 5 years. I learned tremendously from every city I have lived in, the people I met, the culture I discovered. These travels contributed to build my personality and strengthen my self-confidence, as I express myself through sharing and socializing with my surrounding environment. As a true believer of the human capacities, I tend to always see the best in people. Good observer and listener, I understand and apprehend people and situation easily, providing the most adequate solution for them. These qualities became my strongest professional skills. The Summer School was a great experience for me, meeting these international crew and be there for them was a real human experience, from which I would remember responsible and organizational behaviors and empathy skills.

Martin Scherfler

My name is Martin. I stand for integrity, compassion and courage to create. I was born in a small village settlement at the heart of Austria. I grew up playing in the local forests, running after the soccer ball and supporting (often reluctantly so) my parents in their daily farm work and their restaurant business. I hold a masters degree in sociology. In 2005 I moved to Auroville, India where I have been living and working since. Inspired by some of the environmental and educational work done at Auroville, I chose to make this my main area of activity. I am passionate about creating programs and projects that contribute to environmental and social justice and give participants a sense of completion. I love to share this passion with students, volunteers and interns of all ages and backgrounds. People can count on me for being responsible, doing what I say I will do and for me trying to do the best I can.

Arunima Dasgupta

My name is Arunima Dasgupta. I am doing my graduation from Pune University, and am currently in my final year of architecture. I can say that I am a responsible and a hard-working student with an ability to adapt to new situations. I dream of travelling the world and am open to new people and experiences. Since childhood writing and art has been close to my heart. I strongly believe in equality and hope that someday we can live in a world where every person has equal opportunities and rights. The concept of Auroville has always fascinated me. I came to Auroville in May 2014 for a 5-month academic internship with Auroville Design Consultants. Working with bamboo was a first time for me and the entire course of the project that is from the initial design stages to the actual execution on site has been a wonderful learning experience for me. Although there were tough times through the projects execution, being onsite, making calls on certain issues, interacting with the participants, the laborers was absolutely amazing. I hope to be associated with such projects in the future. I also see myself working with more sustainable forms of architecture in the future.

Walter van Asche
Participants implemented a bamboo kiosk at the Auroville Visitor Centre. The structure will be used as a display and interaction point by Auroville units that offer sustainable products or services.
Bamboo Kiosk

The bamboo kiosk at the Auroville Visitors Centre will be used as a small exhibition stand within an existing outdoor expo on sustainable technologies. Functionally the kiosk was designed to maximize surfaces that could be used as panels with easy to manipulate surfaces. As the space will not have any electro-mechanical ventilation systems, the kiosk has a building envelope that allows for orientation to reduce heat gain including a double roof with reflective metal sheet along with a floor that will provide for an upward draft to exhaust the hot air. The pivoted wall panels can be manipulated to control the directional flow of air.

As the primary building material is bamboo, the design uses the poles to provide for a suspended structure that would lift it off the ground, minimizing ground contact as deterrent to insect attack while using the bamboo for its tensile strength. The floor and roof act as a bridge suspended from the 4 main columns, which also allows the form of kiosk to be visually light and accessible. The various members come together borrowing from the natural biology of bamboo that springs from the ground, intertwining with the neighbouring culms to weave lines and curves that move with the wind and seasons, creating suspended spaces.

Suhasini Ayer-Guigan
Principal Consultant
Auroville Design Consultants

Elements of the Kiosk:
1. Foundation
2. Bamboo Members
   A Main Column 1
   B Main Column 2
   C Framing Member 1
   D Framing Member 2
   E Floor Beams
   F Floor Purlins
   G Bracing 1
   H Bracing 2
   I Roof Purlins
   J Horizontal roof members
   K Roof members
3. Pakka Maram Flooring
4. Bamboo Ply for doors
5. Metal Sheet (Roof Covering)
Design Exercise:
Street Fruit & Vegetable Stand

After the sessions on “bamboo as building material” and the hands-on session with building the bamboo kiosk at the Auroville Visitors Centre, participants undertook a time bound designing with bamboo exercise working in design teams.

Design Brief
Design a space, as a knock down structure of 6-8 m², which can be used as a Street fruit and vegetable stand. The structure should have provision for display, place for the vendor to rest during the slow hours and storage of his/her tools and consumables. He/she should be able to lock it up at the end of the business day and leave, so it should be vermin and vandal proof. Provide a designated space for waste bins for the vendor to dispose the cuttings and spoilage. As the kiosk will function in the evenings to tap into the evening shoppers on the way back from work, it should have a provision for lighting using renewable source. The structure should be designed to be mounted on a sidewalk without need for foundations and it should be able to allow the purchaser to be sheltered from the rain while purchasing the fruits and vegetables.
Desirables and essentials:
• Collapsible structure
• Ease of movement
• Sustainable structure
• Energy efficient
• Interactive space/design
• Cradle to Cradle approach

Provisions on the kiosk/cart
• Sliding solar panels
• Frontal display
• Collapsible bamboo supports for the shed
• Two waste bins (organic + other waste)
• Personal storage space for the vendor
• Majority of the material used: bamboo
• Manual energy used to move the cart.
• Collapsible eating slab provided for the consumer
Concept 2 : Freggie Kiosk
by Abhimanyu, Vatsala, Aakanksha, Shrey, Harman

The vegetable and fruit kiosk is a bamboo structure. It is so designed that it could be locked in place or could be dismantled and transferred. The structure establishes simplicity in design depending upon the space constraints and structural stability.

The form and structure has been conceived keeping in mind that the kiosk is to be mounted on a side wall without disturbing the pedestrian traffic. There is proper provision for display and storage. The vendor can rest during slow hours on a hanging cane bed that is supported on main structural members. The LED light lamps are used for lighting purpose for which solar cells are used.

The side walls are detachable cane panels. Proposal of telescopic bamboo members used in the beams for the ease of transportation.
The design started off by making initial sketches of possible structures to the design problem. Points considered during the brainstorming were:
- Movability and possibility to dismantle
- Storage spaces
- Sleeping / resting space
- Feasibility of the structure

Concept 3
by Akshay, Rajat, Rahul, Arunima, Geetanjali
Concept 4
by Shekhar, Keshav, Pritish, Shalabh
Concept 5: Fruttabox
by Valeria, Valerio, Giulia, Alessandro, Ambra

FUNCTIONS
1. Solar panels
2. Shed
3. Trash segregation – Spoilage
4. Cutting
5. Selling
6. Washing
7. Storage
8. Eating
9. Circulation passage / Foldable
Our Future Commitments

Commitment is an act, not a word.”  
Jean-Paul Sartre
Teaching Architecture

Background
During my academic years I've had the opportunity to know many "ways to do architecture". If I have to draw a conclusion and evaluate academic teaching, the first thing that comes to my mind is that there is a lack of pedagogical methods. The problem on which I want to focus is the lack of organization and pedagogically meaningful design of academic courses. Many Architects and Philosophers have written about how to teach architecture and the very beginning of their scriptures have stated that the teachings of this subject is one of the most difficult things. My travels and my studies introduced me to several universities and I could touch on various ways to teach and practice architecture. The main problem of the Italian university is that with each time changing a teacher the method changes as well.

Objectives
The goal that I propose to do (although very ambitious) is to create a school (in the form of PhD) dedicated to research and develop a frame and pedagogy for architecture. I am aware that it is an impossible dream, but the first step will be to ask the doctoral research project.

System Shifts
The current system of teaching architecture should change completely. Italian Universities and research in general have been highly affected by the economic crisis. But forgetting, though difficult, the crisis it is a fact that Italian universities do not function at its best. The mafia within the institution does not allow the intellectual growth that a country should hold as a top priority. Having said that, there should be more funding for research that aims at improving the internal system and teaching methods at universities.

Strategy
I will, propose a plan for a three-year research project. A project that researches and outlines a new pedagogical method of teaching architecture in Italian universities. This will be a method that will foster cross-cultural and multicultural learning and exchange and will be based on dialogue forms and deep interaction where students will discover the knowledge themselves without imposition by faculty members.

by Giulia Desogus

Green Manufacturing - Bamboo Pens

Background
Inspired by the people, the environment they live in and make for themselves, and the unity they have with each other as well as with nature, Auroville surely has changed my thought process. Contrary to that, what I see usually is polluted water, people dying out of hunger, fresh air! (yeah right), and food that is affecting my health badly. Around 60 percent of this crap is the result of industries and factory productions; 33 percent of non-renewable source of energy is used while production and 28 percent while transportation. We can't stop the productions because we are greedy but we can at least be sustainable.

Industrial waste, plastic, chemicals being thrown in water depleting the aquatic life; deforestation; harmful gasses like carbon monoxide, dioxin, smoke, dust being released in air. So let's close the tap.

Objectives
• Human health should be prior in working place or sites.
• Introduce energy efficiency and the use of renewables

System that needs to shift
• Pen producing companies should replace plastic bodies of pens with more sustainable material
• Awareness about the new and sustainable materials should be created amongst the producers and consumers so that it does not go to landfill.
• Work environment should be healthy for labor and work should be done in harmony

Strategy
• Contact the pen producing companies and convince them to replace the plastic to more sustainable material such as bamboo.
• Encourage societies to use more sustainable materials.
• Awareness amongst the people about the new materials or product introduced in market so its production increases.

by Shekhar Dahiya

Giulia Desogus

By 26
Low Cost Housing

Delhi, the capital of India is an over crowded city as a result of over population. Delhi slums were developed by the migrant population who could not afford land in the city. Permanent structures for these people were never built by the government. Thus grew several jhuggis clusters in different pockets of the city. The largest ones being along the banks of river Yamuna. These slums have grown have remained with minimal basic facilities, Cluttered spaces, poor sanitation and ventilation, disorganised waste management etc. In early 2000s, the government activated plans for the 118 acre Games Village and also started an ambitious project of beautifying the Yamuna stretch. To achieve this, the MCD had issued an eviction notice to the jhuggis (makeshift huts) dwellers on January, 2004 which affected at least 5,000 school going children. These people have been homeless since they couldn’t afford to resettle as the compensation cost given per house was just Rs 7,000.

Objectives
- To initiate low cost housing systems in the city
- Introduce the idea of sustainable living. These housing systems should have minimal impact on environment depletion and degradation
- Introduction passive solar techniques and getting back the essence of vernacular architecture.

Systems that need to shift
- The government should start introducing new schemes to make the city ‘slum free’ by offering these slum dwellers quality housing and tenure.
- The local contractors should stop exploiting these people by making poor shelters for these people.
- The architects should start up new low cost housing ventures for these people.

Strategies
- Requesting government to introduce new schemes
- Spreading and creating awareness about the same amongst common people and the needy.
- Promoting the idea amongst fellow architects

Design implementations
- I would introduce a set of modular plans for standard plot sizes according to the localities in the city.
- These plans could be altered according the requirements of these people.
- These houses would provide these settlers better standards for these people.
- The houses will be constructed with low cost sustainable materials with spacious interiors.

By Sakhi Arora

The Sportsman’s Crisis

Background
India has a population of 1.2 billion and yet has achieved only 6 medals in the last Olympic games, which is great but who are these heroes? How many of us know them? Where have they gone? What are their economical and social profiles? “Why” the awareness for the outcomes of the last Olympics is so low in India? Today, the interest towards national sports is declining due to: a) a reduced or inexist-ent acknowledgement given to these athletes, b) a minimal encouragement at the school level, c) few provisions made for kids inclined towards sports and d) limited resources provided by the government: financial, dietary or even personal training. A sports person, after retirement is not considered as one who won many awards for his country but instead treated as any other citizen with no acknowledgement and appreciation. The government housing provided lacks sanitation, hygiene, security and even sometimes basic amenities. The economical situation of these athletes is also in a crisis as the jobs allotted by the government pay as less as Rs.5000 per month.

Objectives
- Get more sports provisions and encourage sports participation at school
- Encourage the children who have a talent towards sports by providing them with scholarships
- Awareness for sponsorships, more government amenities / facilities towards sportsmen.

Systems that need to shift
- The government should start introducing new schemes to make the city ‘slum free’ by offering these slum dwellers quality housing and tenure.
- The local contractors should stop exploiting these people by making poor shelters for these people.
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By Rajat Chauhan
Background

The world is a beautiful place to live in. It was made by people together to live as one, to have unity. God created us as one with no differences and the world was supposed to be peaceful. But the world we live in is nothing like that. Peace is the last thing that this world has. There are infinite issues in the world that are the reasons why this world lacks peace. The major reasons being religion, discrimination, injustice, terrorism etc. Misconceptions about religions, considering oneself superior over the other, discriminating on the basis of caste, color, race, religion, all this leads to fights, wars, injustice, hate and all this enrages people and peace is the last thing they think about. The problem is us. But the bigger problem is the government, media (changing stories, hiding the truth), corruption, greed etc. All these things and many more makes this world worse.

Objectives

• To reduce hate.
• To bring the truth out about what happens in the world.
• To teach people to respect each other's religious beliefs

Systems that need to shift

• Government should make policies mandating the use of sustainable construction practices.
• Policies should be implemented to make a particular stretch of the roof area used as green roof.
• Practicing Architects and even the clients should be made aware of the sustainable building practices.

Strategy

• Finishing the roof with light colored materials to reduce energy loads.
• Optimization in energy consumption such as maximum use of energy efficient equipment, installation of solar panels and photovoltaic for shading devices wherever possible.
• Incorporation of green roof wherever possible which mitigates the urban heat island effects.

By Geetanjali

Retrofitting Existing Buildings

Background

The majority of buildings that will be around in thirty years' time in most markets are already in existence. In some cities, new buildings typically represent just 1-2% of total stock, meaning that sustainable new build projects can only have so much impact. It is clear, therefore, that the greatest opportunity to reduce primary energy use lies within existing building stock, and that improving the energy efficiency and environmental performance of existing buildings will be a crucial step towards making significant inroads toward tackling climate change. Today in India, we have about 25 billion sq ft of existing building stock, of which over 2400 projects amounting to over 1.86 billion sq ft are going green. India is the fourth largest carbon emitter and in the next 20-30 years, the demand will increase to 352 per cent, making it the highest emitter in the world. The only solution to these existing problems is making our existing building green. By doing that, we can save 20-30 per cent in energy, 30-40 per cent in water and at the same time, enhance great occupant, health and comfort. Existing buildings comprise the largest segment of the built environment.

Objectives

• Renovating keeping in mind the effect of building on environment and health.
• Effective selection of materials for construction that are eco-friendly.
• Proper disposal and re-use of construction waste.

Systems that need to shift

• Government should make policies mandating the use of sustainable construction practices.
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By Aakanksha Jain

World Peace

Background

The world is a beautiful place to live in. It was made by people together to live as one, to have unity. God created us as one with no differences and the world was supposed to be peaceful. But the world we live in is nothing like that. Peace is the last thing that this world has. There are infinite issues in the world that are the reasons why this world lacks peace. The major reasons being religion, discrimination, injustice, terrorism etc. Misconceptions about religions, considering oneself superior over the other, discriminating on the basis of caste, color, race, religion, all this leads to fights, wars, injustice, hate and all this enrages people and peace is the last thing they think about. The problem is us. But the bigger problem is the government, media (changing stories, hiding the truth), corruption, greed etc. All these things and many more makes this world worse.

Objectives

• To reduce hate.
• To bring the truth out about what happens in the world.
• To teach people to respect each other's religious beliefs

By Geetanjali
**Background**

Ivrea is a city in the Nord West of Italy, it is a post-industrial town, known for Olivetti industries and natural landscape. The negative impacts of the abandoned industrial structures can gradually destroy the environment of the city; moreover the economy of the town is in constant decline. Bellavista is a residential neighborhood built in the second part of the XIX century for the workers of the Olivetti industries. This area is like a green island located in the middle of the city of Ivrea. In this neighborhood were made some real connection among buildings, nature and people with the design of real relationships between vegetation and architecture. The urban designer tried to reduce the “distance” between the citizens and the natural world. This neighborhood was built to create a peaceful place for people and Olivetti’s workers but the area had lost this characteristic during the years. The goal of the project is the creation of new social spaces for the population and relaxing places using only green and several types of vegetation.

**Objectives**

• Creation of green connections in the neighborhood.
• Creation of new connection between architecture and green spaces.
• Restoration of ancient buildings without new constructions.

**System Shifts**

• The local inhabitants need to understand the importance potentiality of their neighborhood.
• The local government need to understand the importance of new social and cultural investments.

**Strategy**

• Talk with the local people to understand what are their real necessities.
• Work with the local associations to promote the project ideas.
• Organize meeting and conference to talk about the future of the neighborhood.
• Talk to the local government to explain the project ideas.

By Valerio Fogliati

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**Background**

Street dogs!! You can find them anywhere in India, from village streets to the premises of Historical National Monuments. It is not something new to India, it is indeed one of the oldest problems of this country that is yet to be solved. We have shelter homes for cows in almost every city but nobody cares about dogs. Why?? Because they are not as sacred as cows?? In India, does everything has to be in relation to some religion for it to work?? According to Indiatoday.in, India has about 30 million stray dogs, many of which starve to death because they don’t get any food. In 2012, the World Health Organisation estimated that India accounts for 20,000 rabies cases each year. These data clearly shows that this problem needs to be addressed urgently.

**Objectives**

• To create a space where all the street dogs of a region can live in harmony. A space, where they don’t have to starve to death, where they get all the medical facilities.
• To aware the people to adopt the local breeds from these shelter homes for free instead of going for foreign breeds and spending lots of money.
• To make India free from Rabies.

**Systems that need to be shift**

• Government needs to be sensitized about these issues and should introduce a bill in the parliament to tackle this problem.
• Finance minister should propose funds for constructing these shelter homes during the main budget session.

**Strategy**

• I will try to reach to all the passionate people of my city, who really care about dogs and will try to bring them under one umbrella with single goal i.e. to set an example to wake up the local government.
• If it becomes successful, then I will try to approach the D.C. of my city with concrete figures and would ask him to take this movement to a higher scale.
• If we go step by step, we call really raise this issue in the parliament soon.

By Akshay Kundu
Proper Sanitation for All

Background
In India there are many social and environmental issues, lack of proper sanitation is one among them. Today, many families do not have toilets because of financial problems. There is also a lack of general awareness and understanding about the health issues that are related to improper sanitation and open defecation. It’s high time to create awareness about the need for appropriate sanitation for all. Indian government has to provide the public toilets with good facilities.

Objective
• To built toilets for public in good condition and proper supervision
• To aware the people about the disease caused due open sewage systems and open defecation
• To create villages and cities free of open sewage systems and open defecation

Making Brick from Garbage

Background
Capital of India, New Delhi is on a verge of a disaster as its 3 dumping grounds are out of limits hence causing health hazards and environmental problems. According to statistical data, 9000 tonnes of garbage is produced by this city daily and dumped into one of the largest dumping grounds of the country. Interestingly, 80% of this garbage can be converted into energy or compost or any other useful by-product. No alternatives for landfills have been introduced and also 10 more landfills have been proposed which would be catastrophic. An average Indian produces 500 grams of garbage, so a useful by-product with good composted garbage is in very much need as the mindset of the people and the government is not to use composted garbage for agriculture purpose and bio-gas plants are also not successful for cities like Delhi. The useful product which can be introduced is Bricks made of composted garbage. As an average Indian produces 0.5 Kg of garbage per day, so in a family of 4, 1 brick could be produced in a day. Hence, in a span of 10 years, around 4000-5000 bricks can be produced out of compostable garbage. I have named it as C.S.G.B. (Compressed Stabilized Garbage Blocks)

System that need to be shift
• Govt. has to create and properly maintain the public toilets
• To provide a hygienic and clean condition in all public toilets

Strategy
• First of all I will start it from my village by collecting funds from the people of the village then I will request to the District Collector of my city to give the funds to the village Sarpanch to built toilets in the villages.

By Rahul Mor

Objectives
• To create awareness amongst people about how to deal with garbage and fix it in a closed loop system and make it useful product as nothing can be discarded on this earth with a limited space.
• To use the potential of garbage as a commodity in the business market.
• To find alternatives for processing the waste efficiently so that it could be converted to energy or any other useful by-product.

Systems that need to shift
• Govt. has to create and properly maintain the public toilets
• To provide a hygienic and clean condition in all public toilets

Strategy
• First of all I will start it from my village by collecting funds from the people of the village then I will request to the District Collector of my city to give the funds to the village Sarpanch to built toilets in the villages.

By Abhimanyu Goel
The main issues our generation is facing right now and will face in the years to come are probably the ones related to the environment. One of the categories affecting the most the environment and consequently ourselves is the building sector. Buildings account for about 40% of the worldwide primary energy consumption and they are responsible for about 40% of the greenhouse gas emissions. Most of the environmental impacts related to the sector derive from the production of energy necessary to heat and cool the buildings. Thermal insulation, choice of materials and other details related to the building geographic position can reduce a lot the impacts both in the construction and in the use phase.

The general goal of the project is to direct the way a building is designed or retrofitted towards sustainability. One technique to measure the sustainability of a product (or a system of products and activities) is the Life Cycle Assessment (LCA). The general approach of the technique is “from cradle to grave” and it means that the environmental impacts of a product are calculated throughout its lifetime: from the materials production to the end of the product’s life.

The project is about creating a database that would allow builders and architects all over the world to choose the best material to use in a building according to LCA. The goal is to make a ranking for wall structures made with different materials that reach specific thermal conductivities or have certain structural properties. A hypothetical outcome could be that a wall made with bamboo is the most sustainable solution for the south of India region because bamboo is widely available locally and stocks a lot of carbon dioxide during its growth. The objective of my work is to make builders and architects aware of which ones are the most sustainable materials to use in a certain area in order to not leave their final decision to the mere economical parameter.

By Harman Aggarwal
Waste Management in New Delhi

Background
Delhi is the capital of India; it produces over 9000 MT of municipal solid waste every day. Delhi is staring at an actual waste disposal crisis as daily generation of garbage may jump to 19,100 tonnes, or 4,775 truckloads, by 2024, up from the current 9,200 tonnes or 2,300 truckloads. Even the government has failed to find new landfill sites despite repeated interventions by the courts. Three out of four landfills in Delhi have become ‘stinking mountains’, far exceeding their closure deadline. Almost 85% of the city doesn’t have a formal door-to-door trash-pickup system, leading to 2500-odd unhealthy waste dumping enclosures serving as secondary collection centres.

Objectives
- To promote decentralised compost plants to take pressure off landfills.
- Separation of waste at primary household level for proper waste management.
- Use anaerobic digestion to produce energy.

System that need to shift
- The government needs to co-operate and introduce waste management projects.
- There should be proper awareness for such problems so that the people know.
- The local people and society should co-operate and to their part in making our city clean.

Strategy
- I would want to spread awareness among people so that they reduce their daily waste production.
- I would like to start separation of waste on the bases of biodegradable, non-biodegradable and recyclable waste at a primary level i.e.: households.
- I would like to make a compost plant in my neighbourhood to produce manure for the gardens and also methane gas for rural cooking.

By Karishma Advani

Greening AIIMS Campus

Background
As the All India Institute of Medical Science (AIIMS), New Delhi is one the biggest and famous institute in India for medical research and development, it lacks in the terms of sustainability. The people working and residing in AIIMS are fully dependent on nearby markets for fruits and vegetables. There are more than 10000 employees, 300 families, 500 students producing waste around 0.5kg/person which is not treated and sent to the city dump. All hospital and residential sewage is disposed to the main city drain.

Objective
- To develop and nurture a vibrant community through sustainable urban farming practices and sharing of food produced.
- Design and implement a self supportive system of segregation, transportation and re-use of bio degradable waste.
- Implementation of ECO-SAN and recycling of water and nutrients contained with human waste into the local environment.

Systems that need to shift
- Mindsets of the residents of AIIMS to follow a sustainable life.

- The way of disposing the household and hospital waste produced every day.
- Awareness among all regarding sustainability and recycling.
- The Sanitation department who handles the sewage disposal.

Strategies
- Approach the residents of AIIMS with pamphlets regarding all techniques, information regarding urban farming and convincing them to practice it so that it reduces the dependency on the markets.
- Awareness about the advantages and importance of urban farming on terraces and front lawns.
- Approach the house keeping department in AIIMS hospital and households for proper segregation of biodegradable waste and non bio-degradable waste. All bio- degradable waste can be used as compost in AIIMS nursery and in landscaping in AIIMS campus.
- Approach the AIIMS horticulture department to replace their chemical fertilizers with compost.
- Approach the AIIMS sanitation department with a design of eco-san for all hospital and residential purposes.

By Pritish Srinivasan
The Self-sustainable Farmer

Background
A small-scale farmer is the owner of a plot below 6 acres, gaining a minimum income and owning an even lower capital. The ongoing climatic, political, and economical changes have hit strongly the lower class, especially the farmers. This year, monsoons arrived a month late leading to a consequent percentage of crop failure, depletion of the groundwater, and an almost drought situation in the Marathwad region of Maharashtra, as well as some parts of Gujarat. The modernization and globalization of our country have driven the farmer to take up the use of chemicals, fertilizers, and pesticides in order to increase productivity of the land, create more “perfect” looking vegetables and crops, and increase their profits in the market. Nevertheless, they do not realize that they are exploiting their natural resources to such an extent that it will be one day be difficult to bring back what is lost.

At the same time, the conventional farming is driving many farmers to commit suicide, as they are indebted for the purchase of industrial and chemical farming input materials such as fertilizers, seeds, and pesticides.

Objectives
• To create awareness amongst the small-scale farmers about their political and social rights.
• To create awareness and understanding about sustainable approaches towards agricultural methods:
  • Creating a sense of responsibility and trust amongst the local people for the government as well as the private and individual investors.
  • Shifting to a method of collaborative farming and animal husbandry

Strategy
• Need to address the negative impacts of chemically based agriculture on human lives, natural resources, and wildlife.
• To create knowledge and awareness on farmers’ rights and agricultural laws.
• To teach farmers an alternative way and help them become more self-sustainable.

By Satyaprita Gaekwad

The Journey of Craft

Radical transparency in the crafts sector

Background
Indian Crafts have been prevalent for centuries altogether. It is a means of definition for the Indian culture. The versatile vibrance of the crafts echoes across the four cardinals. These traditional crafts reach out to people through various forums. There are craft emporiums that are spread across the nation, active and periodic craft fairs, and also through designers that introduce these local crafts in their design in order to contemporize it. All these forums are convenient for the customers and the crafts manage to seep through the alleys and hills. Even after all the easy access people are not aware of the journey a craft embarks upon. They are unable to relate to the lives that are involved in these traditional crafts. This in return makes them unable to understand steep prices if there are any. This affects the market image of the craft being too expensive and people automatically tend to blame the craftsmen with little knowledge of the system and the division in wages.

Objectives
• Give a breakdown of the cost in order to better aware the customer about prices
• Help the designers to better involve crafts in their design and promote the same

Systems that need to shift
The Ministry of Textiles, Govt of India manages all the craft emporiums; they should participate in introducing radical transparency of the crafts. The designers that involve the craftsmen should be fair with the wages and a genuine.

Strategy
• A thorough inspection of the costing done by the designers as well as the craft emporiums
• As a student of NIFT, it will be more convenient for me to have access to the database for the various crafts and their statistics
• Bring about an awareness of radical transparency and how that will increase the frequency of footfall

By Pankhuri Kanwar
Background
Delhi, national capital territory of India, is a metropolitan region in India. It has a population of nearly 27 million as of 2014 and is the largest urban agglomeration in India by land area and population. It is also the second most populated city on the planet. With such an increasing population, there has been an increase in the population of animals. Despite increased awareness about animal rights, cruelty to animals persists across the country. Be it a pet dog, a chicken meant for the meat shop or cattle heading for the slaughterhouse, all kinds of animals face innumerable sufferings at the hands of humans. Often, trucks are overloaded with cattle. The cattle are forced to stand one on top of another. If they refuse to cooperate, their legs are broken.

Objectives
- To create awareness about the cruelty faced by animals.
- Helping all the animals being brutalized by creating various help centers.
- Encourage government to provide shelter to stray animals.

System shifts
- The government should take care of stray animals by providing them with shelter and take care of enforcement of all the laws made for animals.
- The people of the country should help the animals by providing them food or calling the various help centers for animals.
- There is a need to create awareness among people about the animal rights and the way they are slaughtered for food.

Strategy
- Address the general society regarding the respect that should be provided to animals and create awareness about the animal rights.
- Introduce social and community services that focus on animal’s health and provide them with shelter.
- Contact the government department of the city and ask them for help regarding all homeless stray animals.
- Aware society about the various steps they can take to help animals like informing them about animal help centers close to their houses.

By Shalabh Gupta

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Responsible Waste Management
RBI Enclave, Delhi

Background
Waste disposal management is a very sensitive issue globally. In India about 0.1 million tons of waste is generated every day, which includes all the non-biodegradable and biodegradable waste. Waste collection efficiency in cities ranges from 50-60%. In which the residential and household waste plays a vital role in waste production. The waste that is collected is later dumped in landfills or let in rivers. Out of this 0.1 million tons waste, 50 to 60% of it can be used by farmers as compost and thus closing the loop. According to an Indian survey, every minute a farmer kills himself leaving the rest of the family in debt to companies, brokers and government. Disposing the waste leads to water pollution, land pollution and air pollution and thus affects the biodiversity in a huge way.

Objectives
A) Make people aware about waste related issues
B) Encourage and help the municipal corporation to introduce appropriate waste management strategies
C) Introduce a spirit of collaboration and sharing among people and thus creating unity and harmony.
D) Create a litter free environment at RBI enclave Delhi.

Systems that need to shift
A) People need to cooperate and create awareness for waste disposal.
B) Stricter implementation of the present rules and laws of waste management.
C) Change in people’s thinking regarding waste issues

Strategies
A) I will encourage collaborative sharing amongst people to give products a second life
B) Using internet as a platform to enable collaborative sharing of products or goods such as workshop tools, bicycle, carpool etc.
C) I will introduce waste segregation at source in three categories; biodegradable, non-biodegradable and plastic and will make available proper bins in public as well as private places.
D) Coordination with the government board and municipal board to implement proper waste management for RBI enclave
E) Introduction of waste management programs amongst the children and youth at RBI enclave

By Keshav Goyal

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Taking Care of the Loved Ones

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By Shalabh Gupta
Background
Jaipur is the capital and the largest city of the Indian state of Rajasthan in Northern India. It is the major hub for arts and crafts. It is one of the main tourist destination city. Some of the crafts of the city include bandhan; block printing; stone carving and sculpture. But according to the statics the poverty rate of the city is high and there are many homeless and jobless people. These people do not have homes or shelters to live and they roam around the city begging and seeking for food and shelter. So my issue is to provide them jobs and shelters so that they can live their lives in a better way.

Objectives
• Enhancing job opportunities for homeless and job-less.
• Helping and encouraging the poor to work and creating shelters for their own.
• To decrease the poverty rate of the city by enhancing the local crafts.

Strategy
• Firstly I need to highlight the problem in front of the Indian Government so that it becomes easy to create awareness amongst the local people and to get the funds.
• A centre needs to be designed or allotted by the government where a system for both learning and living can be created.
• Encouraging the skilled labourers in local handicrafts to come up and help in imparting their skills to the poor.
• Collecting the poor and bringing them all together under this system where they can be skilled in local handicrafts which will help them in becoming independent and creating their own shelters which will on the other hand enhance the local crafts of the city.

By Shreya Jain

Background
In Italy we buy a many consumer goods and objects. Sometimes things that we really need, sometimes things that we could do without and sometimes things that we do not need at all and we just buy because the economic system in some way force us to buy them. Besides a lot of people that really need those objects and consumer goods, there are other people that have already plenty of a certain item and they will through away some products and objects a short time after it has ben purchased. Sometimes they don't have a place to store all this stuff. There's a public service to call, that will carry away things to different storage places around the city. Unfortunately it's a little expensive to rent storage space. It's forbidden to just leave big objects close to the garbage boxes, but sometimes they are too big to be carried with a normal car. Then a lot of people just leave stuff on the street, big things, because it's easier or throw them away, small things, because they are boring. There is the bad situation of many neighborhoods, suburban and badly connected with the city center that lack cultural or social services and opportunities. Another issue is jobloss due to the economic crisis. Italy has a long tradition of handicraft and high quality workmanship but the appreciate of the same is dwindling and often the craftsmanship is getting lost.

Objectives
• Reduce the waste of stuff and materials that can still be useful for a new owner.
• Make the people exchange their goods according to their needs.
• Activate the creativity even in people who usually don't use it at all.
• Connect people with each other.

System Shift
• Modify the collecting system of the big objects to be more handle and spread it all over the city.
• Educate the people to do not buy senselessly, to do not waste the things.

Strategy
• Talk with the architecture department of the city administration to find empty big buildings.
• Talk with the social service and the environmental department to follow the project and find a funds.
• Create a connection and database of the workers qualified in different handicraft activities.
• Activate workshop for people who want to learn and produce by themselves.

By Valeria Covinato
Worker Spaces in Abandoned Factories

Background
The economic crisis is the main problem in Italy and in Europe of the last decade. This has caused the bankrupt of numerous industrial companies and the increasing of unemployed, above all youth and just graduated people. So, the Italian scenery is empty - old factory without any function and young people unemployed who can’t both finding a job and starting from the beginning their own business because it is expensive and financially unsustainable. Combining these two issues I have thought a project which could solve these problems.

Objective
The aim of the project is creating new worker spaces into the abandoned industrial buildings, these studios are suitable for courageous young people who won’t start their own business.

Strategy
My project has several strong points. At first renovating and reusing the old factories can be a good solution for giving a new and useful function to empty - huge areas. The second strong point is that workers can establish their own business without charges, and taxes because the projected area will be a place where people can have their rental private office and desk but the tools that they need can be shared with the other workers. So, they can be save money and invest it in their new job only. Public spaces and green areas will be added to the refurbish buildings, these functions are suited with the factories’ huge form. For example, young architects who want to start their activities can rent a small office or only a desk to work and interact with the clients; a meeting room for discussing with the colleagues and they don’t need to buy their own stuff, which is usually expensive, as they can share their tools. For the economically sustainability of the project the government should give incentives to the factory owners for the renovation of the building, this investment can be earned back through rental of space to businesses. This project will be beneficial also for young people as they can work and earn and subsequently help decreasing unemployment.

By Ambra Seghesio

What belongs to the GARBAGE

Background
India creates 1,60,000 metric tonnes of garbage everyday, 1.3 pounds per person per day. A typical Garbage bag consists of Organic-60%, Recyclable- 20%, Toxic- 5 to 10%, Rejects-10%. Out of all this 94% is dumped, 5% composted, 1% recycled . That 94% of waste is disposed off unsafely, either burned in an uncontrolled manner or dumped in a landfill where contaminants can leach into the ground water. This waste has to be segregated at various levels in order to drastically reduce the amount of waste to be landfilled, but proper segregation is currently not being done. The mounds of huge garbage piles up in our cities creating serious health issues to the public and the rag pickers who earn their living by selling the recyclable waste. Most of the wet waste can be composted and used to create compost or biogas. Most of the plastic, metal and glass waste can be recycled instead of going into the landfill.

Objective
• To create awareness among the people about the importance of waste segregation
• Ensure responsible municipal waste management
• Encourage effective management for collection, segregation and treatment of solid waste.

Strategy
• Empowerment of the rag pickers
• System that need to shift.
• The local municipal authority should strictly follow the rules under Municipal Solid Waste 2000.
• The common people have to work at the household level on this problem.
• Strict actions like fines should be enforced by the government on the people not found segregating their wastes.

By Vatsala Khandelwal

By Vatsala Khandelwal
Auroville Green Practices aims to bring together various stakeholders to envision future townships that offer a habitat that is ecologically, socially and economically nurturing.
“Whatever you can do or dream you can, begin it. Boldness has genius, power and magic in it.”

- W.H. Murray