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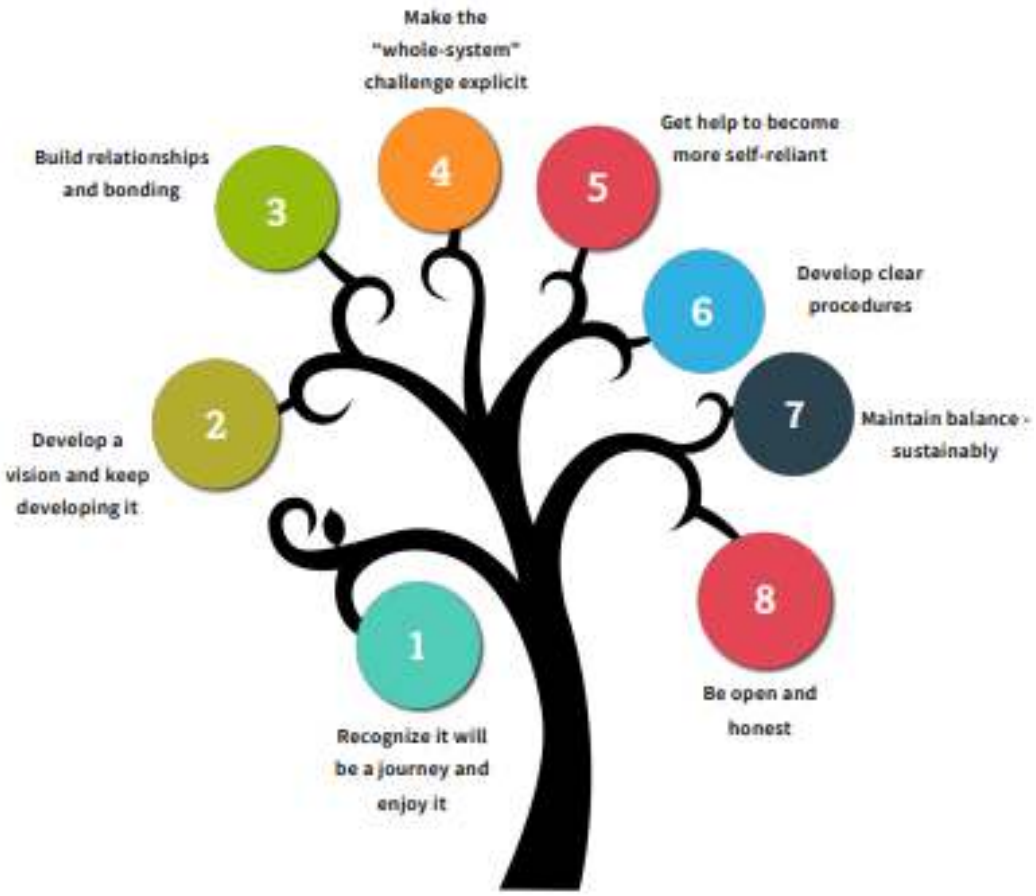
12 ESSENTIAL GUIDEPOSTS TO CRAFTING A WHOLLY SUSTAINABLE COMMUNITY



Constructing a sustainable community transcends being merely eco-friendly; it entails weaving a rich mosaic of social, financial, and environmental elements. Inspired by Robert Gilman's seminal piece on eco-village formation, we've augmented the model with four additional vital steps that are close to our hearts.

Here is your in-depth roadmap to fostering a community that is not merely sustainable but profoundly transformative.

1. **Embrace the Journey** – Relish It! Understanding that community-building is a marathon, not a sprint, is paramount. It is essential to savor the process, leaning on perseverance, affection, and tenacity as faithful allies during this voyage.
2. **Craft a Vision** – And Continually Refine It A collective vision serves as the community's cornerstone, continually aligning with the changing objectives of the community members, fostering unity and purpose.
3. **Rurban Living :** Harnessing the Best of Both Realms By merging the positives of both rural and urban lifestyles, the "Rurban" strategy seeks to elevate neighboring communities through skill development programs, fostering a mutually beneficial partnership that nurtures everyone involved.
4. **Cultivate Bonds and Relationships** The heartbeat of any community lies in robust interpersonal connections. Undertaking activities such as sharing meals, narrating stories, and embarking on group journeys can cement these fundamental ties.
5. **Samavridhi :** Universal Prosperity "Samavridhi," a term rooted in Sanskrit, embodies the principle of "well-being for all." This ethos expands the notion of prosperity to embrace the welfare of all living entities, fostering a habitat where every creature can flourish.
6. **Addressing the Whole**- System Challenge Transparently With a solid vision and relationships established, the subsequent phase involves pinpointing and tackling the challenges that lie ahead, facilitating a harmonious and fruitful community dynamic.
7. **Navigating the Seven Facets of Sustainability** This stage emphasizes the integral Seven Facets of Sustainability: Water, Soil, Air, Food, Earth, Energy, and Community. Recognizing the intertwined nature of these elements is key, as a shift in one inevitably influences the others.
8. **Seek Assistance** – Cultivating Self-Reliance Communities must acknowledge that they cannot have all the answers initially. Pursuing external guidance while nurturing in-

house competencies creates a balanced, informed, and autonomous community.

9. **Unreal Estate :** Prioritizing Conservation Over Consumption This approach transforms the conventional ethos of real estate development. The emphasis here is on resource conservation and optimization, a strategy that is both environmentally responsible and economically prudent.
10. **Establishing Unambiguous Protocols** Formulating clear protocols for decision-making, conflict resolution, and fiscal administration is essential to avert potential future conflicts, fostering a cohesive community environment.
11. **Achieving Sustainable Equilibrium** : Maintaining a healthy equilibrium is vital, necessitating a careful calibration between individual and collective interests, present and future requirements, and diverse perspectives within the community.
12. **Fostering Transparency and Candor :** Open dialogue, especially concerning delicate matters like community power structures, can avert numerous challenges. Being forthright and transparent about these dynamics ensures a harmonious community fabric.

Developing a sustainable community is a fluid, ever-evolving endeavor, necessitating unwavering dedication to the holistic well-being of all its members.

By embedding these 12 crucial guideposts into your eco-village or community project, you are setting a strong foundation for a community that not only flourishes sustainably but serves as a lighthouse of comprehensive well-being.

For further insights, delve into Robert Gilman's foundational article here.

At Organo, these principles are firmly established. We welcome your thoughts on what else we could incorporate or streamline.

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Picture a community as a complex puzzle, with each individual representing a unique piece. Social nodes serve as the glue that binds this puzzle together, connecting people, enabling sharing, and facilitating harmonious functioning.

Whether it's your school, neighborhood, or online circle of friends, social nodes are the places where individuals foster connections, organize events, listen to each other's ideas, and offer assistance to one another when needed. In our interconnected world, driven by technology, these social nodes play a pivotal role in helping us find our sense of belonging and contribute to the growth and enhancement of our communities. Understanding the significance of social nodes is crucial as they breathe life into our communities, serving as the linchpin that connects individuals and enriches our society.

For designers, the concept of place-making becomes a potent tool for crafting communities that are safe, inclusive, and conducive to meaningful connections. Place-making isn't merely about constructing physical spaces; it's about transforming these spaces into cherished locations that resonate with the people who inhabit them. Think of your favorite park or that cozy corner in your neighborhood – these are the tangible outcomes of place-making efforts.

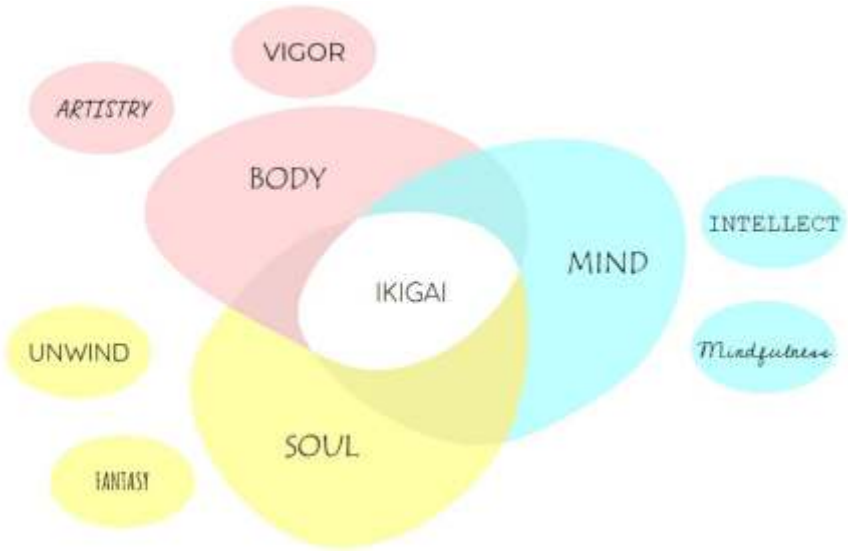
Place-making is akin to alchemy, where ordinary spaces are transmuted into extraordinary places. These places instill a profound sense of ownership and belonging, contributing significantly to the cohesive fabric of society.

A community building event happening at Raavi Palle cluster club in Antharam

Place making at Antharam:

In the sprawling 60-acre Organo Antharam, featuring 182 villas, community, and well-being take center stage. Villas are thoughtfully organized into clusters, each housing around 20 villas, and each cluster offers a unique experience reminiscent of diverse Indian village clusters.

These villa clusters are more than just living spaces; they are vibrant communities in themselves. Each cluster boasts a dedicated social node or cluster club, meticulously designed and programmed to cater to residents of all ages. These cluster clubs are designed around the principles of ikigai, ensuring activities and spaces that promote holistic development for individuals and the community.



Ikigai- "iki" (生き), which means "life," and "gai" (がい), which means "value" or "worth". The idea of finding purpose, meaning, and fulfillment in life.

The thematic framework of “mind," "body," and "soul" guides these cluster clubs. The "mind" theme encourages activities that nurture intellect and mindfulness. The "body" theme focuses on physical fitness and artistic expression, with sub-themes like "vigor" and "artistry." The "soul" theme provides spaces for relaxation, introspection, and self-discovery, with sub-themes such as "unwind" and "fantasy."

Place making strategy at Antharam

To further enhance connectivity and community interaction, the development features three major social nodes or clubhouses strategically located throughout the site. These nodes encourage residents to explore and engage with one another. In each cluster, there are designated play areas for toddlers and serene spaces for elderly or less mobile residents, ensuring inclusivity. This meticulous planning not only provides diverse living experiences within each cluster but also fosters a profound sense of community and well-being throughout the development.

Kids and adults preparing snacks for a community event at Raavi Palle cluster club in Antharam

Principles of Place-Making:

1. Community Engagement : Collaborate with residents to understand their needs and desires.
2. Identity and Heritage : Celebrate the history and culture of the place, making it distinct.
3. Mixed-Use and Accessibility : Create inclusive spaces with a variety of activities to enhance vibrancy.
4. Sustainability : Employ eco-friendly designs and materials to preserve the environment.
5. Flexibility and Adaptability : Design spaces that can evolve with changing community needs.
6. Safety and Security : Ensure well-lit, well-signaled spaces to promote safety.

Significance of Place-Making:

1. Community Engagement: : Involving residents in the design of their neighborhoods fosters connection and pride in their surroundings.
2. Cultivates Identity : Crafting unique spaces can boost local prideand attract visitors, benefiting the local economy.
3. Enhances Quality of Life : Well-designed parks and public spaces promote physical and mental well-being, fostering connections among people.
4. Boosts Economic Development : Attractive public spaces can attract businesses and tourists, generating employment and revenue.

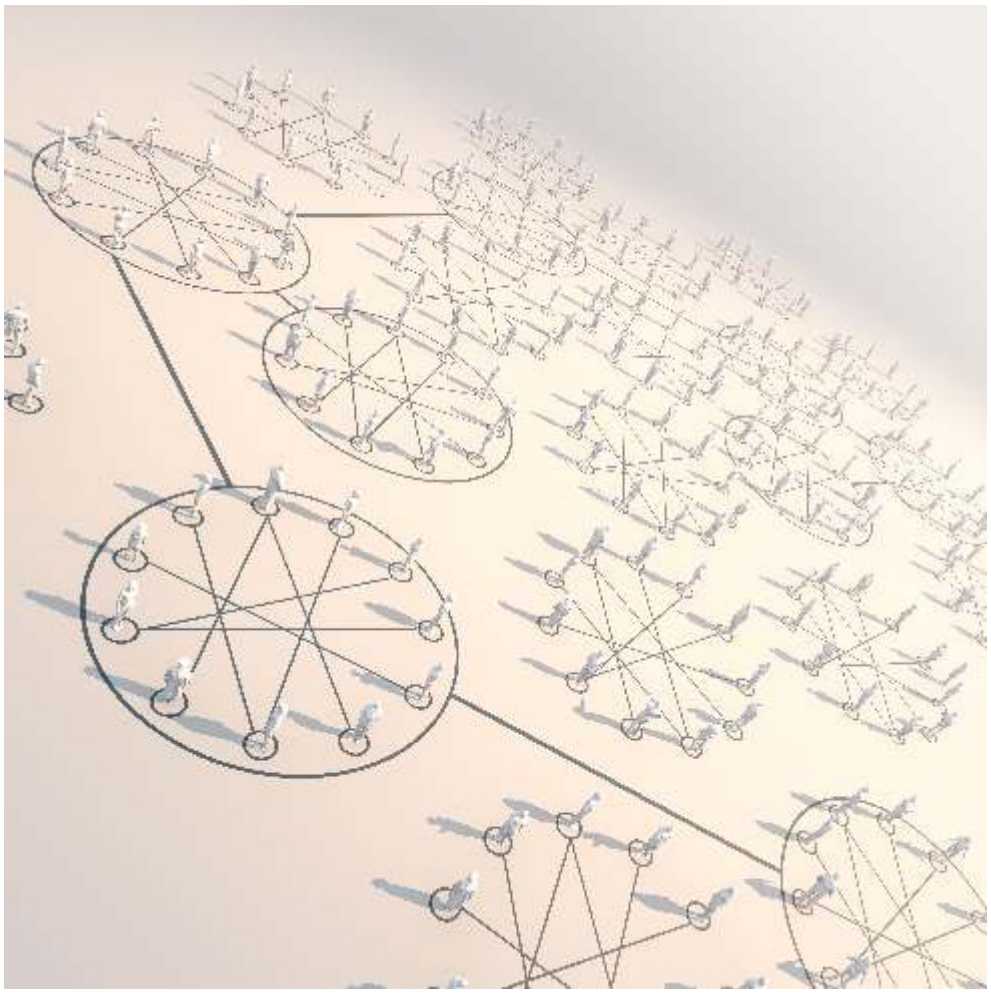
Way Forward:

In the future, Organo Antharam should serve as an exemplary model for placemaking endeavors. It will illustrate how meticulous attention to community engagement, well-being, and distinct character can create spaces that deeply resonate with residents. The strategic placement of major social nodes should promote movement and interaction, strengthening the sense of community and connection.

As we move forward, this project challenges us to reconsider how we design and develop our communities. By prioritizing diversity, inclusivity, and holistic well-being, we can create places that not only serve as homes but also as thriving centers of life, growth, and fulfillment. Organo Antharam should stand as a testament to the power of thoughtful placemaking, where the heart of any community lies in the richness of its experiences and the bonds among its residents.

Sources :

1.https://www.pps.org



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Author: Chaithanya Ravilla, Architect - Product Design

At Studio Organo, we are focused on creating spaces that celebrate living, we are not just building structures; we are fostering environments where people thrive and enjoy life. This mission is deeply fulfilling. The user narrative is a powerful tool that allows us to articulate spaces that resonate with people on a profound level. By weaving together the architect's perspective with the user's needs, desires, and behaviors, we unlock the potential to craft transformative environments that go beyond aesthetics and functionality. We embrace the user narrative, we embark on a journey of empathy, creativity, and innovation—a journey that leads to spaces that truly touch the lives of those who inhabit them.

There are two places that we apply user narratives -

1) during home and neighborhood design, and 2) creating the product presentation. So, want to know what it takes to articulate an architectural blueprint into a living, breathing space that truly resonates with the people who inhabit it? Have a read below about embedding user narratives during design and during design presentations.

What are User Narratives in the context of Organo's Product Design Process?

As architects, we are often consumed by the intricate dance of lines, forms, and structures that comprise our designs. We immerse ourselves in the technicalities, aesthetics, and spatial arrangements, striving to create visually appealing and innovative spaces. Yet, as we tread this creative journey, there's an essential aspect that we must not overlook: the **"USER NARRATIVE."**

Architectural design is not solely about erecting physical structures; it's about crafting environments that resonate with the people who inhabit them. This is where the user narrative comes into play. It is the rich tapestry of experiences, emotions, and behaviors that individuals bring to a space. Understanding and incorporating the user narrative alongside the architect's perspective elevates our designs from functional to transformative.

1. **Bridging the Gap Between Vision and Reality:** An architect envisions spaces with an expert eye, driven by artistic and technical prowess. However, without considering the user narrative, this vision may remain confined to blueprints. By embracing the user's perspective, architects can mold their designs to be more relatable and responsive. When users see their needs and preferences reflected in the design, a sense of ownership and connection is fostered.

2. **Human-Centric Design:** Architecture's essence lies in serving people. Buildings exist not for their own sake, but to enhance the lives of those within them. The user narrative provides insights into how spaces will be used, facilitating designs that accommodate various activities and functions. Whether it's at home level or a community level, a deep understanding of user needs ensures that spaces become extensions of their personalities and lifestyles. Creating user narratives allows us to place people at the center of our design process. This shift from abstract concepts to real individuals and their stories adds depth and meaning to our work.

Focussing on wellness: Embracing the serenity of the forest

3. **Enhancing Functionality and Flow:** User narratives shed light on movement patterns, interactions, and daily routines. This knowledge empowers architects to create layouts that maximize space utilization, minimize wastage and promote smooth transitions between spaces. A well-designed space transcends aesthetics; it harmoniously facilitates the coexistence of inhabitants with their surroundings, enriching the overall experience.

Meditating beside a tranquil pond, overlooking the forest

4. **Enhanced Problem Solving:** User narratives present challenges and constraints that require creative problem-solving. Overcoming these challenges and finding solutions that align with the user's needs can be intellectually stimulating and joyful.

5. **Emotionally Resonant Design:** Spaces have the power to evoke emotions, from tranquility in a park to inspiration in a museum. By integrating the user narrative, architects can channel these emotions intentionally. A workplace that fosters creativity, a healthcare facility that instills comfort, or a residence that exudes warmth—all are achievable when architects embed the desired emotional experiences into their designs. Immersing ourselves in the lives, needs, and aspirations of the users establishes a profound connection between us and the people who will inhabit our creations. This connection often leads to a deeper sense of purpose and satisfaction in our work.

6. **Sustainability and Adaptability:** User narratives also inform the lifecycle of a building. How will it evolve over time? Adapting to changing user needs and environmental considerations is key. When architects understand how a space will be used in the long run, they can design for flexibility, minimizing the need for major renovations and contributing to sustainable practices.

7. Fostering Engagement and Community: Architectural designs can create opportunities for social interaction and community building. By immersing themselves in user narratives, architects can create spaces that encourage gatherings, collaborations, and shared experiences. Such environments foster a sense of belonging, sparking connections among users

Enjoying breakfast at Alfresco, sharing laughter with friends and family

8. **Validation of Design Thinking:** When we see that our designs resonate with users and enhance their quality of life, it validates our design thinking and choices, reinforcing our confidence and satisfaction in our work.

Creating cherished bonds ,Playful moments with kids

9. **Measuring Success:** One of the most fulfilling aspects of integrating user narratives into architectural design is the feedback loop it creates. Architects can observe how their designs impact the lives of those who inhabit them, leading to continuous improvement and refinement. This iterative process ensures that designs evolve to better serve the users, making their experiences richer and more rewarding.

10. **Building Lasting Relationships:** Working closely with users to understand their narratives often leads to meaningful client relationships. These relationships can be professionally and personally enriching.

Creating memories, friends sharing stories, singing, and enjoying the warmth

Why and How we use narratives in Product Presentations

There's a crucial transformation happening in the way we present our designs. In crafting product presentations for homes and neighborhoods, we've shifted our focus from an architecture-centric approach to one that places the user narrative at the forefront. Our aim is to provide our end users with a truly immersive experience, where they don't just see physical spaces but envision the life they'll lead within them. These presentations are carefully woven with stories that mirror their aspirations and dreams, allowing them to connect on a profoundly personal level. Every slide, every image, every detail is thoughtfully curated to illustrate how these spaces will become an integral part of their unique journey. It's about offering them a glimpse into their future homes or neighborhoods, painting a vivid picture of the life they can create within these spaces. Our presentations are now more than just showcases; they are windows to a deeper understanding of what their home or neighborhood can truly mean to them.

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AUTHOR: RITU CHOUDHARY, ARCHITECT- PRODUCT DESIGN

At Organo, our aim is to continually push the boundaries and venture into new frontiers when it comes to materiality. While our master planning already achieves net-zero and sustainable standards, we have been incorporating alternative building materials at the individual building level. This push is expected to contribute significantly to reducing the overall carbon footprint, and one promising material we've encountered in this pursuit is "Vedic Plaster," a natural plaster option.

For Organo Kandawada homes, we decided to upgrade the interior walls with this plaster, instead of the regular cement plaster. Let's understand what this product is, discover the rationale behind this earth-friendly decision, and share our explorations and findings with you.

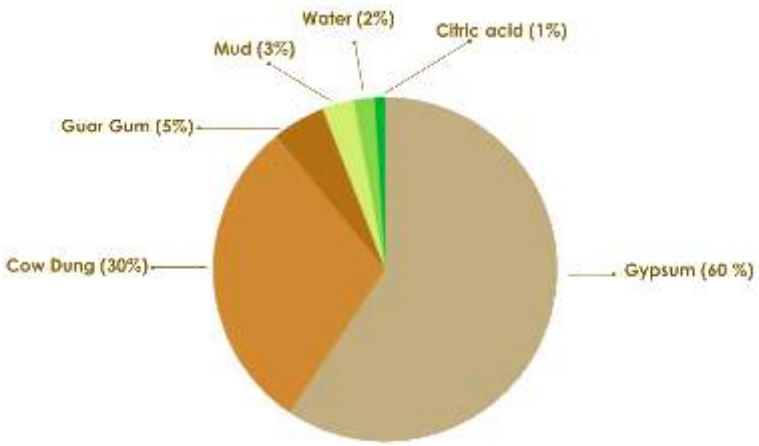
What is Vedic plaster?

Vedic Plaster is a natural plaster manufactured by a company of the same name. What sets it apart from regular cement plaster is the use of cow dung sourced from indigenous Indian cattle breeds as a replacement for cement.

What is the composition of this plaster ? Where are the ingredients sourced from?

The entire mixture comprises approximately 30% cow dung, which is sourced directly from cow shelters (goshalas). The resulting plaster exhibits exceptional surface finish properties, enhanced by the inclusion of lemon extract, Guar gum, gypsum sand, and other natural ingredients.

Plaster mix = Cow Dung 30% +Gypsum 60 %+ Guar Gum (5%) +Mud (3%)+Water (2%) +Citric acid (1%)



Cow dung, being both cost-effective and an outstanding thermal insulator, plays a pivotal role in this formulation. The enzymes present in cow dung serve as excellent binders, while it also offers protection against damage from salts and humidity. It is worth noting that this valuable information about the benefits of cow dung in plaster is often overlooked by civil engineers, architects, and interior designers, as it is not commonly taught in their training and education. Additionally, the production process of Vedic plaster minimizes electricity usage, mainly for grinding purposes, in stark contrast to cement plaster production. Importantly, all production components are derived from natural resources, and no chemicals are added, thereby creating an eco-friendly product.

What are its benefits?

1. **Benefits to the end user**
   Vedic plaster presents an equally good alternative that could potentially bring about a transformation in both the plaster and paint sectors. It serves multiple purposes: acting as a thermal insulator with the ability to create a significant temperature variance. Typical studies shared by the manufacturers show a temperature variance of 10-15 degrees.

   Furthermore, the thermal insulating properties of cow dung plaster contribute to a cooling effect during the summer and provide warmth in the winter, thus reducing the need for air conditioning.

   Vedic Plaster also functions as a natural air purifier, has radiation resistance, and even

appears to be a mosquito repellent—all while prioritizing safety for your health and the durability and strength of your walls.

2. **Benefit to the environment**
Vedic Plaster presents an environmentally conscious alternative to traditional plastering methods. Its production process is eco-friendly, primarily relying on grinding with minimal energy usage. The choice of natural materials in its production ensures an environmentally responsible product, devoid of harmful chemicals.

   This innovation leads to reduced water consumption during application. Post application, since it brings down AC loads, there is less energy consumption within the home. Hence, there is lesser climate footprint of the home itself.

   Vedic Plaster provides not just plastering advantages but also decreases the need for additional paint coats. As a substitute for paints, it can also incorporate natural components and extracts from fruits and vegetables to infuse color. Unlike traditional cement plaster, which typically consists of four stages (plastering, wall protection putty, wall smoother or primer, and final painting), Vedic Plaster typically necessitates just a single wall coat. However, our on-site experience regarding this aspect proved to be different, and we'll share our learning further in this article.

3. **Benefit to the farmers**
The other components found in the plaster, including gypsum, guar gum, and lemons, are witnessing increased demand, mainly due to their use in industrial applications. It's worth noting that this surge in demand has had a significant and positive effect on farmers, particularly in the case of guar gum, which is derived from cluster beans. Guar gum has never experienced such high demand before, and this increased demand has greatly benefited farmers by improving their livelihoods and income.

   Trails, Learnings and Pragmatic approach to Vedic Plaster

   Vedic plaster is a pre-prepared plaster mixture that streamlines the application process. To utilize it, the worker only needs to blend it with soft water to create a paste, which can then be directly applied to a bare wall. Initially, the plan was to simply apply this plaster to the walls and then paint over it, as we were advised that traditional cement plaster or wall putty is typically not required when using this product.

   However, while actually implementing it in the Kandawada homes, we were

not satisfied with the finish, as despite our best efforts, there were still significant undulations on the walls. Consequently, our site team, in collaboration with the Vedic plaster team, decided to apply a thin layer (2 mm) of putty over the plaster to achieve the desired smooth finish without any irregularities. After which, a coat of primer, followed by a coat of smooth finish paint, gave the wall a clean, smoother, and stronger surface.

Additionally, considering the customer's preference for interior aesthetics, this smooth finish paint offers versatility and can complement various interior design styles while ensuring enhanced building performance.

Take-Away

Despite these minor changes, the overall benefits of Vedic plaster remain substantial, making it a promising and sustainable choice for interior wall plastering in the Organo Kandawada homes. As we continue to explore and refine its application, Vedic plaster represents a significant step towards eco-conscious, healthy, and cost-effective interior design and construction practices.

There is a wide range of eco-friendly products available in the market, including bricks, flooring, paints, fiberboards, tiles, etc. The potential is extensive, and we are actively researching these options with the intention of integrating them into our upcoming projects. Keep an eye out in this section for new content as we journey into the world of alternate construction materials.

Sources :

1.https://www.vedicplaster.com/about.html
2.https://thearchspace.com/cow-dung-as-a-building-material/#Vedic_Plaster

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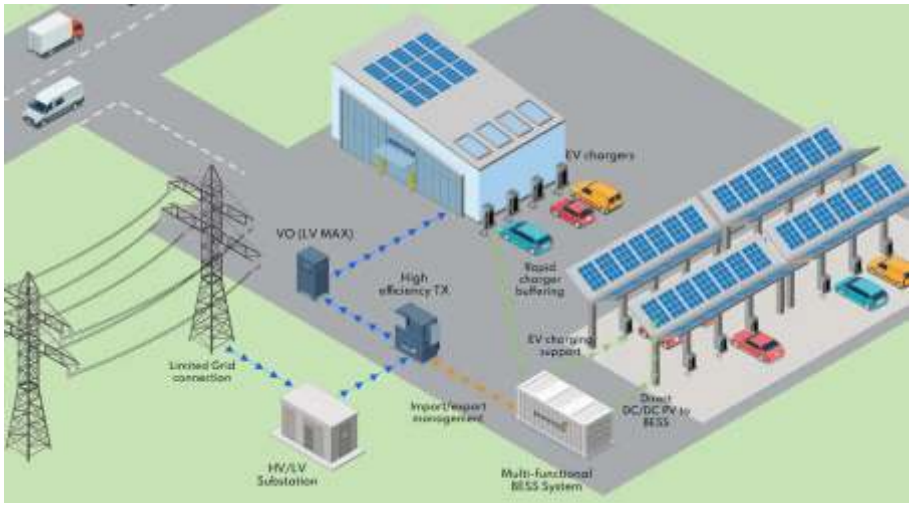
Unlocking the Power of BESS: Transforming Energy Storage



Key Insights into Battery Energy Storage Systems (BESS):

Capturing Surplus Energy: BESS possesses the extraordinary ability to store surplus electricity generated during periods of abundance, such as when renewable sources like solar and wind produce more power than the immediate demand requires. This not only reduces wastage but also serves as a strategic reserve to tap into during peak consumption periods.

Grid Stabilization: BESS plays a critical role in stabilizing electrical grids. Its agile capacity to absorb or inject power enables it to respond swiftly to fluctuations in supply and demand, ensuring steady voltage and frequency within the grid, thereby acting as a safety net against erratic grid behaviour.

Peak Shaving: Peak energy consumption can strain conventional power plants both environmentally and economically. BESS intervenes by supplying stored energy during high-demand moments, effectively reducing both costs and the ecological footprint associated with peak load power generation.

Empowering Microgrids and Remote Areas: In regions with limited grid connectivity, BESS is a saviour. By providing consistent power in microgrids and remote areas, it fosters energy security and resilience against grid outages.

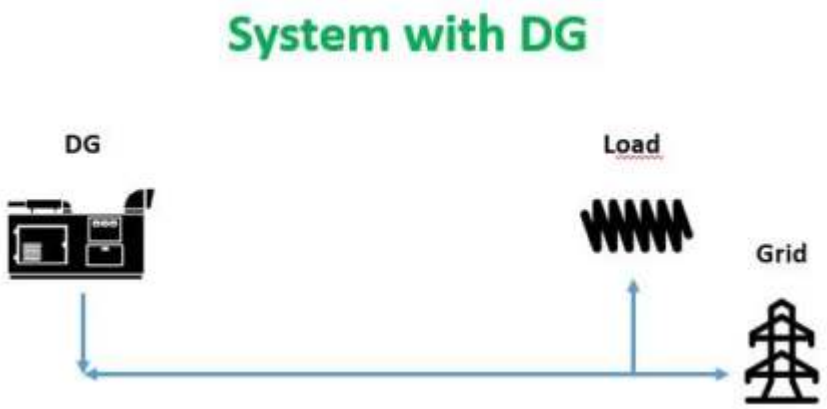
Dependable Backup: A hallmark feature of BESS is its ability to act as a reliable backup during power outages, seamlessly taking over when the main power source fails to ensure an uninterrupted supply to critical systems.

In the following sections, we analyse three specific cases, using Organo Kandawada as our reference point. All calculations and scenarios presented here are tailored to meet Organo Kandawada's unique energy requirements and infrastructure.

Case 1:

Survive and Thrive:
Conventional DG Setup's Power Outage Solution

Diesel Generator	
Equipment	**Cost**
500 KVA Cummins Diesel Generator	₹ 2,800,000.00
GST 18%	₹ 504,000.00
Total Cost of each Generator	₹ **3,304,000.00**
Total Cost of Generators (3 no.s)	₹ **9,912,000.00**



Case 2:

Organo Naandi's Power Duo:
DG Setup and UPS for Uninterrupted Living

In the previous case mentioned above, there exists a deliberate time delay of 10-15 seconds before the DG system activates and delivers power. This practice is commonly adopted by Original Equipment Manufacturers (OEMs) to prevent frequent system activations.

At Organo Naandi, a 5 KVA UPS system serves as a 30-minute backup solution. The DG system is engaged only after this half-hour window. This strategic arrangement not only ensures backup power but also curtails the DG runtime, subsequently minimizing diesel consumption.

Nonetheless, certain drawbacks are associated with this setup:

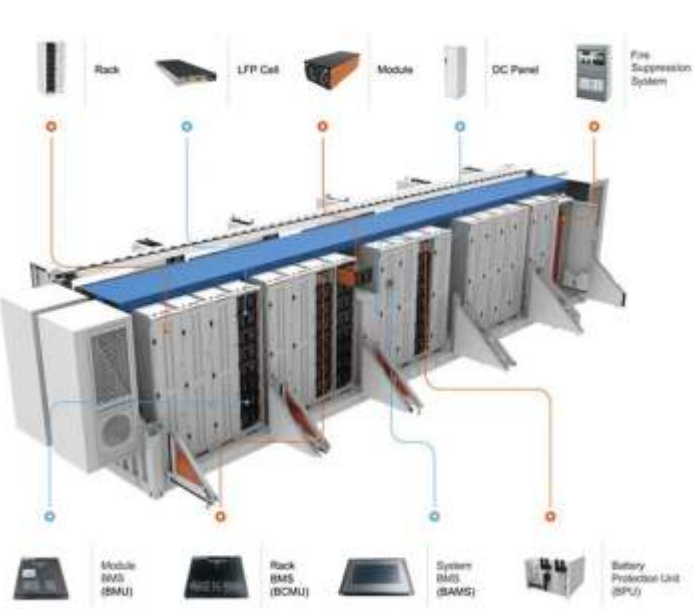
1. Battery Replacement Cost: The primary concern revolves around the expense linked to battery replacement. The UPS employs lead-acid batteries with an approximate lifespan of 4-5 years. Consequently, battery replacement becomes necessary every 4th year.

2. Maintenance Challenges: The maintenance of UPS units presents challenges, mainly due to their indoor placement within residences. Securing the homeowner's consent for maintenance activities can be q problem.

Case-2 Diesel Generator		
Equipment		**Cost**
500 KVA Cummins Diesel Generator	₹	2,800,000.00
GST 18%	₹	504,000.00
Total Cost of each Generator	₹	**3,304,000.00**
Total Cost of Generators (3 no.s)	₹	**9,912,000.00**
Home UPS		
4 Kva UPS system 100 AH Battery of 4 No.s	₹	58,000.00
Total Cost for 126 villas	₹	**7,308,000.00**
Total Cost with Generators & UPS	₹	**17,220,000.00**
Cost of replacing Batteries in the 4th year	₹	**40,000.00**

Case 3:

Organo Kandawada's Green Revolution: Shedding One DG, Embracing Centralized BESS



As a key component of our strategy, we are streamlining our power infrastructure by eliminating one of the three proposed DG sets. In its place, we are implementing a centralized battery system (BESS) with the capacity to provide a comprehensive 1-hour backup. In a complementary manner, the two remaining DG sets will seamlessly transition into the backup role once the battery bank's energy is depleted.

Within this integrated system that encompasses four power sources (Solar, Grid, DG, and Batteries), our advanced Battery Management System (BMS), which comes with the BESS takes centre stage. The BMS allows us to tailor our power priorities to meet specific needs. During the morning hours, the solar source takes precedence, harnessing the maximum available sunlight. As nighttime falls, the order of preference shifts to battery power, followed by the grid, and then the DG sets. These preferences can be easily customized to suit changing demands.

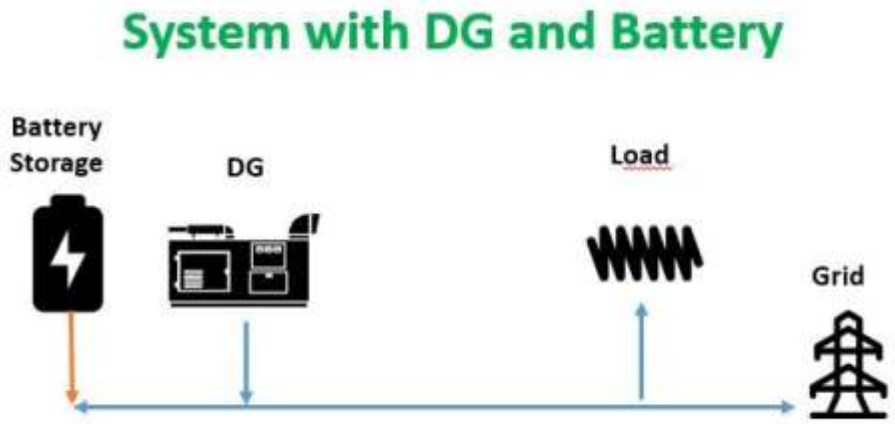
In the event of a grid failure, our on-grid solar system automatically deactivates. This situation is addressed through the Battery Energy Storage System (BESS) that takes over by providing the necessary reference voltage to enable the solar system to continue generating energy. This innovative approach ensures a continuous power supply, even when the grid is unavailable. When the solar system generates energy during such a scenario, the primary objective is to fulfil the immediate load demand. Simultaneously, any surplus energy is directed towards

charging the batteries within the BESS. This dual-purpose utilization optimizes energy usage, contributing to both load requirements and battery storage replenishment. If surplus energy remains beyond the load demand and battery charging needs, the BMS takes proactive measures. It sends precise signals to the inverter, instructing it to curtail the solar system's power generation. This dynamic response ensures that energy generation aligns with immediate consumption and storage priorities.

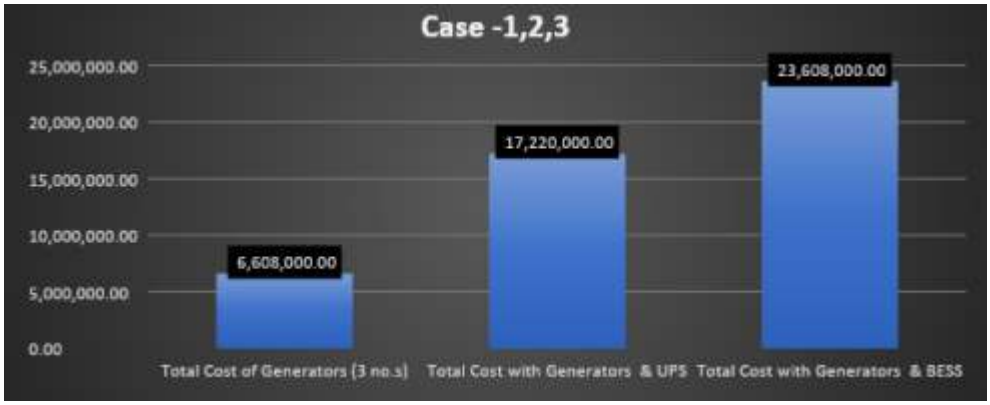
As the BESS seamlessly integrated with the Main LT panel and DG panel. An important safety measure is enacted: when the battery charge drops to 20%, the DG set is automatically initiated. Ensuring that the DGs are maintained at over 30% of their rated capacity safeguards against the potential damage caused by reverse spinning, thus preserving the integrity of generator components.

Through this integrated and intelligent approach, we're not only guaranteeing a consistent power supply during grid failures but also optimizing energy usage by prioritizing load demand and battery charging. This strategy underscores our commitment to efficiency, adaptability, and sustainable energy management.

Case-3 Diesel Generator		
Equipment		**Cost**
500 KVA Cummins Diesel Generator	₹	2,800,000.00
GST 18%	₹	504,000.00
Total Cost of each Generator	₹	**3,304,000.00**
Total Cost of Generators (2 no's)	₹	**6,608,000.00**
BESS (Eliminating 1 DG set)		
BESS 500KW/550 KWH (1 Hrs)	₹	**17,000,000**
Total Cost with Generators & UPS	₹	**23,608,000.00**



Graphical Representation with all the Three cases:



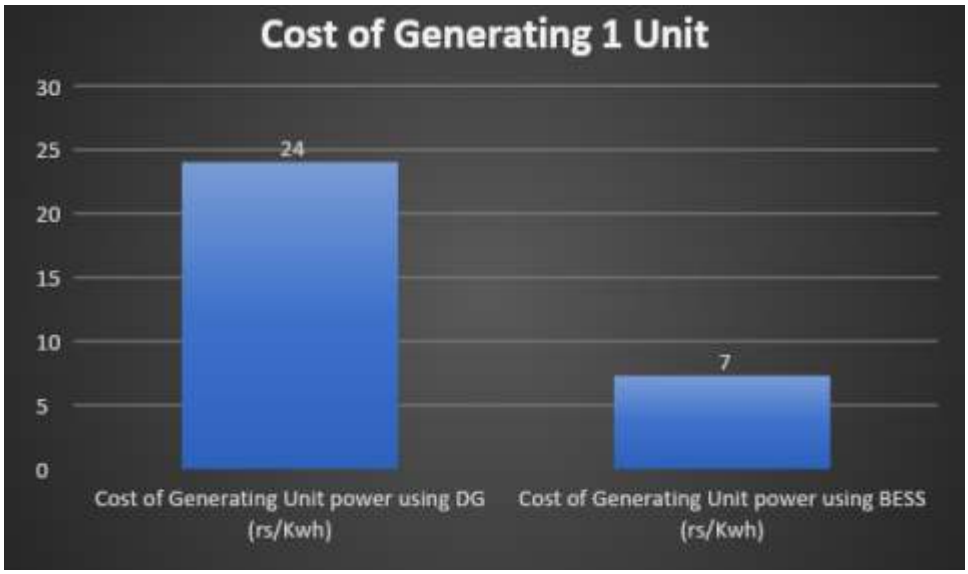
Home UPS vs. BESS: The Ultimate Showdown for Savings:

Presently, the typical lifespan of Li-Ion batteries is approximately 6000 charging cycles, equating to a remarkable 16years of operational longevity. However, within our prudent evaluation, we are contemplating a span of 12 years. During this 12-year timeframe, we anticipate regular Home UPS to undergo three routine replacements of the batteries.

Crunching the Numbers: What Does It Really Cost to Generate 1 Unit of Power:

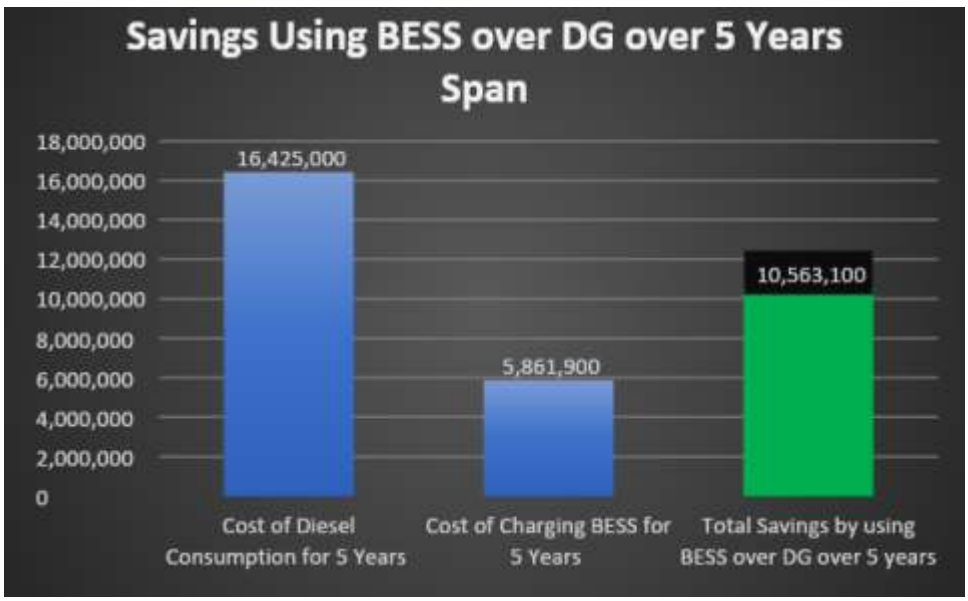
As per the below chart it can be clearly interpreted that BESS charges less amount when compared to a regular DG set.

Diesel Consumption Per Load (500 KVA)	Liters/Hour
3/4 Load (375KVA)	90
Full Load (500 KVA)	120
Cost of Diesel Consumption every day for 1 hr with 75% load (considering rs100/liter)	₹ 9,000
Cost of Generating Unit power using DG (Rs/KVA)	₹ 24
BESS Charging	Rs/Kwh
BESS 550 Kwh after 80% discharge(440 kwh) Battery Charging from Grid after 1 Hr discharge(@rs 7.3/Kwh)	₹ 3,212
Cost of Generating Unit power using BESS (Rs/Kwh)	₹ 7



5-Year Showdown: DG vs. BESS - Who Wins the Cost Savings Battle:

Cost of Running 1 DG Set		
Cost of Diesel Consumption every day for 1 hr with 75% load (considering 100/liter)	₹	9,000
Cost of Diesel Consumption for 1 year	₹	3,285,000
Cost of Diesel Consumption for 5 Years	₹	16,425,000
Cost of Running BESS		
Cost of Charging BESS after 1 cycle everyday	₹	3,212
Cost of Charging BESS for 1 year	₹	1,172,380
Cost of Charging BESS for 5 Years	₹	5,861,900
Total Savings by using BESS over DG over 5 years	₹	10,563,100



Summary:

The data presented in the graph clearly illustrates that the investment in a 500KVA BESS can be recovered within a period of 6 years when compared to the expenses associated with operating a 500 KVA DG set over the same 6-year timeframe. This compelling cost analysis underscores the financial advantages of adopting BESS as an energy solution.

Sreenidhi International School Students Visit Organo Antharam

On the 22nd of September, 62 8th-graders from Sreenidhi International School visited Organo's 3rd Eco-habitat to gain an understanding of how sustainability is integrated into the eco-community.

Their trip commenced with an introduction to the seven strands of sustainability by Mr. Srinath Manda, our General Manager. He discussed how we naturally produce food, regenerate the earth, utilize solar energy, implement clean air strategies, design shelters, employ water harvesting strategies, and emphasize the importance of community members. Following this concise introduction, the students were divided into two groups.

One group accompanied Mr. Srinath to explore polyhouse farming, natural agriculture, and the creation of Jeevamrutham. The other group joined Mrs. Susmita and Mr. Prabhakar to learn about solar power generation, water harvesting methods, and the community's design elements.

In the polyhouse, Mr. Srinath explained the significance of the structure, how it enhances soil fertility, and the various crops cultivated within.

They were shown the bio fencing surrounding the community and its contributions to improving air quality and other benefits. Near the farming area, they were educated about the strategies employed in Organo Antharam to maintain fertile soil and the importance of natural food production.

Finally, they visited the lawn area near the clubhouse where they personally crafted Jeevamrutham.

Meanwhile, the 2nd group of students with Mr. Prabhakar delved into solar power generation within the community.

They witnessed the functional construction of car parking areas with solar panels shading the area.

At one of our cluster clubs, they observed the architecture aimed at enhancing social interactions among residents. Information was provided about how houses were designed to act as natural coolers, improving ventilation and daylight. Additionally, they explored bio pools and discussed their significance.

Upon completing one round of activities, the students enjoyed snacks at Rurban Hive. Subsequently, the two groups swapped experiences. Following the conclusion of all activities, they received a bottle of Jeevamrutham to use at home for their plants and an energy tracker to monitor their electricity consumption patterns and reduce energy usage. Several teachers and students provided feedback. The children bid us farewell with smiles of appreciation.

We extend our gratitude to the 8th-grade teachers for affording us the opportunity to showcase sustainability in action.

If you are interested in our field visits for your students,

please contact us at 91541 00775

Gaudium School Visits Organo Et School's Farm

On September 19th, 2023, The Gaudium School students visited Organo Et School's Farm. When they arrived our team warmly received them and directed them to a shaded area for settling down.

Following everyone's seating, Mr. Srinath Manda, our General Manager, introduced Organo Et School's mission and emphasized the significance of natural farming. He vividly illustrated the challenges faced by farmers and urged the children not to waste food.

Following this insightful introduction, we divided all 127 students into three groups. Mr. Srinath personally led one group on a comprehensive tour of the farm. He began by showcasing Gongura and Thotakura plants grown in farm patches by recent Kindergardeners.

Subsequently, he provided a demonstration on composting techniques using organic farm waste.

The tour proceeded to Mandala gardens, where the students learned about the concept of mandala gardens and the various flowers and herbs cultivated there.

Continuing the tour, the students explored the Soybean field and received an explanation about monocrops. They were also introduced to a pest catcher within the Papaya Plantation.

Afterwards, the students witnessed the farm's water harvesting methods and observed the farm equipment used for precise fertilizer application through drip irrigation.

Inside the polyhouse, they were presented with different crops and informed about the advantages of polyhouse cultivation.

The final stop was the banana plantation, where the students examined banana plant leaves, flowers, and fruits.

Simultaneously, another group engaged in the creation of Jeevamrutham, a natural fertilizer made from ingredients such as besan, jaggery, cow dung, cow urine, and soil. Mrs. Sreedevi Ande guided them through the process, explaining its significance in natural farming. The children thoroughly enjoyed this hands-on activity.

The third group, under the guidance of Mrs. Susmita Changkakoty, conducted a soil test to analyze soil texture. After the soil had settled, the children observed its distinct layers. Each group rotated through all three activities, allowing everyone to partake in each experience. Some of the students and teachers also shared their impressions and insights.

If you are interested in our field visits for your students,
please contact us at 91541 00775

The Gaudium School's 3rd Grade Students takes a field trip to OES Farm

On September 1, 2023, 131 Gaudium school students from the third grade, along with their instructors and school staff, arrived at our farm. Organo Et School and farm staff greeted them all and led them to the assembly area. The children seated beneath the tent area ate small snacks that they had brought with them.

Introduction to Natural Farming

Mr. Srinath Manda, General Manager of OES, gave an introduction in which he discussed sustainability. Mr. Vijay Ramana then introduced Natural Farming. He described the techniques of natural farming, the different types of soil, and the benefits of natural fertilizer for soil enrichment. He also teaches them about how natural farming benefits both people and the environment. We explained how we can live a chemical-free lifestyle. We discussed how we manufacture bioenzyme and live a sustainable lifestyle.

Farm Tour

Students were divided into groups and dispersed to see the farm area, with some remaining to undertake some activity.

The youngsters were really delighted to tour around the farm and observe the various crops and veggies.

They witnessed papaya plants, banana plantations, soyabean plantations, and various vegetables such as chilli, spinach, amaranthus, ginger, and ridgegaurd, among others.

They also went to the polyhouse to learn how to produce vegetables within a netted house.

Soil Test

The second group of students got to work on their soil test. Under the supervision of Susmita Changkakoty, assistant programme coordinator, and Sreedevi Ande, an expert in urban gardening, they filled the bottles with soil and watched as various soil layers settled inside. For homework, they were handed handouts on the soil.

Jeevamrutham making

Making a Jeevamrutham was the group's second activity. Children were made to sit with the material kit while learning about the many materials that go into producing Jeevamrutham. Sreedevi Ande gave them an introduction to the various ingredients, including soil, besan, cowdung, cow urine, and jaggery. The majority of the kids could name the objects. She gave them instructions on how to produce the jeevamrutham, and OES farm supervisor Mr. Nagraj filled the bottles with the jeevamrutham so they could take it home and use it on their plants. We offered jeevamrutham handouts and an activity book before the children said goodbye.

Event-1

KINDER GARDENERS' GRADUATION DAY

After a month of hard work, the kindergardeners came to harvest the crop they had sown and receive their graduation certificates. It was a great day, and they thoroughly enjoyed themselves.

They all gathered at the tent area, where their teacher, Mrs. Sreedevi Ande, explained why some of their Thotakura leaves had holes. She explained that pests had attacked them and demonstrated how to control them naturally. She also discussed the difference between natural and chemical pesticides.

Mrs. Sreedevi demonstrated how to prepare neem oil and buttermilk solutions. The children sprayed these solutions on the demo patch, and she explained the significance of doing so.

Later, the OES team invited children and parents to the patch area to learn how to harvest. Mrs. Sreedevi instructed them to uproot Gongura and cut Thotakura near the roots. Children happily harvested the crop along with their parents.

After harvesting, we invited the children to receive their certificates from our General Manager, Mr. Srinath Manda, and their teacher, Mrs. Sreedevi. The children were overjoyed to receive their certificates, their eyes, faces, and bodies gleaming with joy as they accepted them. Along with the certificates, we also gave them coriander and spinach seeds to sow at home.

Afterward, some of the parents engaged in conversations about their professions and interests while the children enjoyed a farm tour led by our assistant program coordinator, Mrs. Susmita Changkakoty. As the children left, they expressed how much they would miss their farm Sundays. We want to thank all the parents for bringing their children every Sunday to experientially learn about natural farming.

Event-2

KINDER GARDENERS AT ORGANO GOSHALA

On 10th September, our kindergardeners visited our goshala located in Bakaram village and thoroughly enjoyed the experience.

Upon their arrival, our team warmly welcomed the children and provided an introduction to the distinctions between Western cows and Indian cows, as well as the nutritional benefits of milk. The children enthusiastically answered questions related to milk and its derived products.

Following this brief introduction, our farm experts, Mrs. Prabha Damodharan and Sri Lakshmi Battula, escorted the students to observe the process of cutting fodder and distributed fodder to each child for feeding the cows.

Additionally, each child received a pair of bananas for feeding, an activity that they greatly relished. Some of them even fed the cows by hand.

Subsequently, they were invited to tour a biogas plant, where they learned about its functioning and witnessed how the generated energy was utilized in the goshala's kitchen.

They were also educated about the preparation of paneer, cheese, and buttermilk.

Once they were all comfortably seated, we served them buttermilk and provided activity books for them to work on. The children eagerly picked up pencils and crayons and engaged with our activity books. Towards the end of the visit, some parents and children shared their testimonials about their experiences.

Work Shops

LAUNCHING 6TH BATCH OF KINDERGARDENERS

Do you want to teach your child about farming? Do you want children to be aware of where food is produced and how it is produced? Do you have children who aren't scared to work hard, get dirty, get in, and help? Then, make sure to enroll them up for the upcoming "Kinder-gardeners" session at OES Children's Farm.

Here are some reasons why every child should work on a farm. Through farming, children learn about the origins of their food, how to care for the soil, how to be more aware of nature and the weather, and how to appreciate food.

About the Kinder Gardeners program

After registering, each of the 20 children will be given a 3X3 square foot plot to grow their vegetables on. They will be given a 30-35 day harvest schedule (matching to a standard Green leafy harvest cycle). Natural growth practices will be taught to them by members of our agricultural team and OES employees. They will get sensory learning by witnessing the soil preparation, seeding, caring, weeding, plant health care, and harvesting procedures. They must travel to the patch with their parents or legal guardian every weekend at the set hours to tend to their crops.

There are just 20 patches available for this batch.

What we are able to offer

For the course's 30-35 day duration (5-week leafy crop cycle, seed to harvest), each child will have a farm plot measuring approximately 3X3 square feet. Seasonal saplings and seeds (2-leafys), bio-fertilizers, farming tools and fundamental natural farming advice on what to do on the weekend. Farming activities such as preparing the land, planting, weeding, tending, growing, harvesting, and more.

Farming instructor who will instruct kids on how to care after these crops. Along with farming there will be other activities such as a visit to a Goshala and learning about biogas plants, turning clay into art, and how to paint with natural colors. There will be an informal seating area for parents and guardians close to the agricultural area.

What the kids are expected to carry out

Every weekend they come and go at a certain time to tend to their farm plot. Bring their own gardening supplies, such as gloves, spades, watering cans, and child-safe scissors, as well as proper clothing, such as weather-appropriate clothing and sturdy shoes.

Adopt a farm-friendly attitude. Bring snacks, food, and drinks for oneself. Bring cloth napkins and hand towels. Bring paper or canvas bags to transport the freshly gathered produce to your home. The children will have sensorial learning on growing seasonal leafy greens at the end of the Crop Cycle.

OES will issue you a certificate upon completion of the course. Recognise their contributions by featuring them on the OES website and social media channels.

Program Details:

Start Date	:	5th November 2023
Duration	:	Five weeks (Every Sunday session)
Venue	:	Organo Et School Children's Farm campus, Kesaram, Chevella Rd. [About 40 mins drive from Gachibowli]
Timing	:	Sharp 9:00am – 11:00am
Age Group	:	4 - 8 years
Program Fee	:	Rs.4750 per child (including GST)

Call **9154100775**

ABOUT ORGANO ET SCHOOL (OES)

Organo Et School empowers people to embrace eco-living mindsets, behaviors, and habits. We recognize that for any positive impact to be sustainable, it must be long-term and inter-generational.

Organo Et School is a learning initiative set up by Organo in 2017 and has been facilitating field visits and workshops for Schools and Interest Groups. Organo Et School has had over 25+ schools, 6500+ students, and 3000+ adults participate over the last 5 years.

You can find our upcoming workshops here https://www.organoetschool.co.in/registration

Subscribe to our channel: https://www.youtube.com/channel/UCVe5InTKtgyGsGgNVNZ5sOw

Follow OES news on: https://www.organoetschool.co.in

Follow OES on Instagram: https://www.instagram.com/organo_et_school/?hl=en

SITE PROGRESS OF ANTHARAM

Entrance Pavilion

Transformer yard with equipment in place

House of Activity shaping up to ready to be completed soon

Dugwell is full with rain water

SITE PROGRESS OF DAMARAGIDDA

Construction of 39 units has started

Rainwater harvesting under the main arterial road

Farming has commenced

SITE PROGRESS OF KANDAWADA

Entrance Pavilion

East and West Facing Model Homes

Farming starting between clusters

On-site photographs at **Organo Antharam**

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