COMMUNITY & ENVIRONMENT INITIATIVES AT

Compiled by Radhakrishna Shenoi
FOREWORD

Over the last 20 years, ever since the concept of Marari Beach Resort was envisaged and brought to life, it has stood out as a shining example of the CGH Earth group’s commitment to being a responsible corporate citizen, focused on sustainability. In the current context, to be sustainable would mean to have a strong focus and concern for the environment, understanding and contributing to socio-cultural factors like getting the local community involved and preserving local traditions. We have also focused on economic sustainability, by working on uplifting the community around, so that they too can reap financial benefit from our presence.

In all these aspects, Marari has stories of inspiration and success to share. It has been a pioneer in several of the initiatives that it has undertaken: not just within CGH Earth but also by Industry standards.

This manual, hence, is unique and gives a complete view of what Marari has achieved in this space and its continuing emphasis and focus on sustainability.

I take this opportunity to acknowledge the perseverance of the entire team of Marari Beach and sincerely appreciate the initiative taken to document the stellar efforts towards Responsible Tourism. I am sure this will enthuse many to take this path less travelled. We owe it to nature to seek how we can return manifold, its riches that we reap.

Michael Dominic
CEO, CGH Earth

PREFACE

Marari Beach is indeed a nature lover’s delight. It truly stirs the soul of those who step foot on its glorious sands. When blessed with such a gift, we are indeed honoured to take precious care of the eco-system and to ensure our wholehearted focus on its replenishment. The Management of CGH Earth and the entire team of Marari have, over the years, invested effort, expense and endless time towards maintaining the resort in a sustainable and responsible manner.

Through this compilation, I strive first, to record our each step towards sustainability and to quantify these efforts to understand the impact of what we do. Not only will this help us as individuals but also help spread the awareness amongst others in this industry, and thereby reinforce the concept of Responsible Tourism in Kerala.

We have a huge role to play in how we shape the world of the future and driving awareness is just the starting step. This book is our endeavour to capture the richness of the flora and fauna that we have been blessed with, at Marari. It also elaborates on how we have appealed to our Global customers, while retaining our ethos. The balance between sustainability and profits in a business venture is a delicate one. I have also showcased how each of our initiatives have, in the long run, made business sense for us. This makes it a very compelling case for us, to uphold that Sustainability is the very core of how we do our business.

I, personally, have taken time to capture every nuance of what we do at Marari, for Responsible Tourism, and through this narrative, I hope we will inspire many more to follow.

Radhakrishna Shenoi
General Manager.
Marari Beach.
GOD LIES IN THE DETAILS WAITING TO BE DISCOVERED.

It is this simple belief that has inspired us ever since we opened the doors of our first hotel in 1957.

In our quest to create unique environments where the world can discover life anew, we have realised that the best of the world lies in the smallest, the most inconspicuous everyday wonders around us. Over the years we have discovered so much more of ourselves through nature. We have learnt that less is more. That luxury lies in simplicity. That reality is far more enchanting than fantasy. And that the magic lies in what we have and what is within. These profound realisations have found manifestation in the spaces we construct, in our cuisine, our services, our accommodation and our Ayurveda therapies. And today, our ideas are inspired and born directly from our surroundings. Not only reflecting them, but also protecting and nurturing them.

So instead of just another holiday package that provides the predictable sights and sounds of the land, we offer you a string of experiences that are unbelievably pure, unexpected and soul stirring.

Experiences that can turn your holiday into a sojourn for the self.
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INTRODUCING
MARARI BEACH

‘Kerala’. The Land of Coconuts occupies a happy space between the Arabian Sea on one side and the Western Ghats on the other. Alappuzha is one of the 14 districts in the state of Kerala and towards the north of the Alappuzha coastline is a quaint little fishing village - ‘Mararikulam’. Located here is Marari Beach, a CGH Earth Experience Hotel. Laid out over 26 acres of lush green land, it is by loving design that the Marari Beach Resort is an architectural resonance of the village from which it has derived its name. Elements like the usage of local construction material, thatched roofs, lime-washed walls, terracotta floors and even outdoor baths add to the authentic ambience that we endeavor to preserve. Our involvement of the local community and our passion for local flavors have substantially influenced the resort, evoking a unique and compelling offering suited to please the modern day traveler who is keen on an experiential holiday that is immersive, transformative and sustainable.

OUR CORE VALUES

Every CGH Earth experience is built on the bedrock of our non-negotiable core values.

Environmental Sensitivity
We touch nature with sensitive hands. And we believe that when we take from the land, we are beholden to give back.

Involving The Local Community
To us, at CGH Earth, our engagement does not end with merely providing employment to the local community. By understanding their perspectives and creating a culture of shared wellbeing, we have created our own space in their eco-system.

Adopting The Local Ethos
We believe in a participative ethos that is both inspired and enriched by the wisdom and wealth of the cultures that are unique to the lands around us. It is these core values that have become the invisible pillars on which we have raised the flag of the CGH Earth experience.
Environment Profile of Alappuzha

Alappuzha, commonly known as the "Venice of the East" was the first planned town of Kerala. In an attempt to understand its real meaning the word 'Alappuzha' was split into its component parts 'Alam' and 'puzha'. According to Dr. Gundert Alam it meant 'broad' while others suggested the Malayalam translation of 'Azhham' that literally meant 'depth' while 'Puzha' meant river.

Topography

Primarily a coastal district with a sea shore that extends for over 52 kms, Alappuzha occupies only 5% of the total geographical area of the state. With a total area of 1444 sq.km., Alappuzha district is uniquely the only district in Kerala that does not bear the footprint of the hill ranges of the Western Ghats. A major part of the district is wetland. Extensive paddy fields and numerous coconut plantations abound in this area. The taluks of Cherthala, Ambalapuzha, Karthikappilly, Kuttanadu and the western portions of Chengannur and Mavelikkara lie entirely in this region. Paddy is the most common crop grown in the valleys, while tapioca and rubber are cultivated along the slopes and uplands. While there are no high hills or mountains in Alappuzha district, here’s where you will find interesting rock formations like Pandavanpara and Nattavanpara in the Chengannur Taluk of the district.

Kuttanadu is considered the Rice Bowl of Kerala and about 46% of the people here are involved in agriculture. Almost all of Kuttanadu is about 0.6 to 2.2 metres below mean sea level. These low-lying areas have been reclaimed with the construction of bunds. And today, Kuttanadu, with its intricate network of bunds and canals is also known as the "Holland of Kerala."
Climate
Alappuzha enjoys a tropical humid climate with intense summer from March to May followed by a season of plentiful rainfall. During this season, the South-West monsoon drenches the coast of Alappuzha by June and continues until the end of September. The winds of the monsoon then retreat, making way for the North-East monsoon, which commences in October and goes on until the end of February.

Temperature
Temperatures vary from 27°C to 35°C, with the hottest period falling between February & May. December and January are relatively cooler months with temperatures varying from 20°C to 26°C.

Rainfall
Both the South-West and North-East monsoons provide fairly good rain to the area. The annual rainfall received here is anywhere between 1700 to 3800 mm.

Geology and Soil
The Coastal tract of the district comprises sediments like Alluvium, blown sands etc. At Alappuzha, Cherthala and other places in the neighbourhood, homogenous layer of fine sand overlays the basic cover of mud. This mud has been found to be highly acidic in reaction with sulphurous incrustations in several areas. The mud-bank near Alappuzha which is known as 'Chakara' is an interesting phenomenon. In the western part of the Kuttanadu area, the soil is highly acidic and the sediments consist of alternating beds of loose sand and hard, stiff clay in variegated colours. The southern parts of the Kuttanadu area to the east of Purakkad and Thottapally, and south of Thakazhi are known as 'Kari' lands.

Inland exposures of lateritized sands, popularly called The Warkali formations, lie on the eastern side of the coastal tracts near Mavelikkara, Chengannur, Bharanikavu, etc. Glass-sand deposits have been found in and around Cherthala in the Alappuzha coast. The average thickness of these deposits is around 1.5 metres.

Rivers & Lakes
The 3 important rivers flowing through this district are Achankovil, Manimala and Pamba. There are two beautiful lakes in this district, the Vembanad Lake and Kayamkulam Lake. The Vembanad Lake is a breathtaking expanse of backwater, stretching from Alappuzha all the way to Cochin. In order to prevent the intrusion of saline water as well as the effect of tides into the lake, a bed-regulator across the neck of the Vembanad Lake between Thanneermukkam and Vechur was constructed in 1974. Every year, in the month of December, when the saline water begins to intrude into the lake, the shutters of Thanneermukkam regulator are closed, only to be reopened in June when the monsoon begins. And that’s why, the backwaters of Alappuzha are renowned the world over for being the only fresh water backwaters in the world.

Vegetation
Most of the land in Alappuzha has been utilised for agricultural and housing requirements. Interestingly, even though there are no forests in this district, there are numerous well protected sacred groves which contain many forest plants that are usually found in Western Ghats. The major part of the district is wetland that has been either cultivated or left as marshy lands. Consequently, these areas are covered with an abundance of aquatic and semi-aquatic plants. Mangroves, semi mangroves, sea-coast plants, etc. can be found along the coastal areas of the district.
ENVIRONMENT PROFILE OF MARARI BEACH

- Total Area: 26 acres
- Total Built Up Area: 17,560 Sq. m
- Total Lawn Area: 12 acres
- Coconut Grove Area: 12 acres
- Vegetable Farming Area: 5 acres
- Varieties of Trees: 52
- No. of Coconut trees: 1,750
- Varieties of Mango trees: 12
- Varieties of Medicinal plants: 200
- Species of Birds: 50
- Species of Butterflies: 86
- Species of other Insects: 85
- Species of Freshwater Fish: 30
- Hens: 10
- Ducks: 20
- Cows: 6

STAFF EMPLOYED SOLELY FOR ENVIRONMENTAL ACTIVITIES

- 3 naturalists
- 7 farmers
- 8 gardeners
CONTRIBUTION TO CONSERVATION OF NATURE & ENVIRONMENT

Sensitivity to the environment is an important core value in CGH Earth. We do our best to touch nature with sensitive hands, and to give something back to the ecosystems around us. We want to ensure that the impact of our activities on the environment is positive and the carbon footprint we create is minimal.
To this end, some of the practices that we follow at Marari Beach include:

**WASTE MANAGEMENT**

We follow the basic principle of The 7 R’s...

1. **RECYCLE**
2. **REFUSE**
3. **REDUCE**
4. **REUSE**
5. **REPAIR**
6. **RE-GIFT**
7. **RECOVER**

In order to abide by this philosophy, the hotel has created a standard operating procedure that monitors and tracks every single activity, keeping waste generation as the primary area of focus and concern. During the course of operating the hotel, we now have a comprehensive picture which begins with listing out the waste that is generated on a daily basis:

- Food waste from the kitchens, restaurants and staff cafeteria
- Waste water from the toilet, drain water from the dish washer and kitchen
- Plastic waste which includes pet bottles, film papers and packaging material
- Ceramic waste / concrete waste / broken tiles / broken glass
- Paper waste like newspapers, cartons etc.
- Organic / agriculture waste
- Metal waste / E waste

The waste that is collected by the staff during the course of their work is segregated at source and stored at two locations in the hotel premises. Based on the nature of the waste, we apply the principle of the 7 R’s. So food waste gets converted into compost, plastic bottles get reused, containers are recycled on our premises or handed over to an external vendor who has the commitment and expertise to carry out the requisite recycling. Even broken bricks, concrete waste, broken terracotta pots etc. are ingeniously used to make pathways in our vegetable gardens and at other locations.

These practices form a part of our philosophy because we believe that by minimizing waste, we are creating an ethos of self-reliability and sustainability.

CGH Earth has tied up with a recycling company called Green Fields that helps us in our recycling endeavors. As part of our daily engagement, we hand over up to 20 different types of material including plastics and metal, which are then transported to their processing plant in Etumanoor, where all the waste plastic is recycled into cubes that are used as input feed for companies who incorporate recycled plastic in their manufacturing process.

Waste Management (composting) for Organic / Agricultural waste

**Mulching and EM Composting**

Bio mass digesters that are placed at multiple locations across the resort, work efficiently to convert fallen dry leaves and other agro waste into organic manure with the help of cow dung. The compost collected at these Bio mass digesters are then brought to the vegetable garden where a part of it is used for mulching. By covering the soil with the compost and dried leaves, the soil retains its moisture. Another natural consequence of this is the prevention of weed growth due to the blocking of sunlight. These dried leaves later disintegrate and nourish the soil.

Effective Micro Organism Composting (EM Composting) is another method used for composting of dried leaf especially the used thatch of our villas. This is a method of composting using specially prepared bacteria called lacto bacillus (Lactic acid bacteria) which breaks down the thatch to create a special kind of compost. This process normally takes 60 days.

**Raised beds**

By virtue of the native topography, the terrain encompassing our hotel is extremely sandy, lacking the ability to retain water and manure. To augment water retention, we use ‘raised beds’ and ‘mulching’. Discarded cardboard, paper and newspapers are reused to create a base for the beds that helps retain water and manure. We have found that coconut pith also helps in this process.

**Vermicomposting**

Creating compost using earth worms like Eisenia fetida and Eudrilus Eugeniae, is called Vermicomposting. It is a mesophilic process where the earthworms feed the organic waste materials along with other microorganism and pass it through their digestive system. Their excrement which is in granular form is known as vermicompost or castings. The compost can improve the biological, chemical, and physical properties of the soil. The chemical secretions in the earthworm’s digestive tract help break down soil and organic matter, so the castings contain more nutrients that are immediately available to plants. A wide range of organic residues, like straw, husk, leaves; stalks, weeds etc. can be converted into compost. Earthworms can reduce the volume of organic waste by 40–60 percent, simply by consuming it! With an individual weight of around 0.5 to 0.6 gms, earthworms can eat waste equivalent to its body weight and produce cast equivalent to about 50 percent of the waste they consume in a day. The moisture content of castings ranges between 32 and 68 percent and the pH is around 7. The level of nutrients in compost depends upon the source of the raw material and the species of earthworm.

The worm castings have been found to contain higher percentages of both macro and micronutrients when compared with regular garden compost. Apart from other nutrients, a fine worm cast is rich in NPK in readily available form. This kind of compost enhances plant growth, suppresses diseases in plants, increases porosity, increases microbial activity in soil and improves both water retention and aeration.

Vermin tea or vermin wash is the liquid produced during this process. It is extremely rich in nutrients and can be applied directly to plant foliage, thereby enhancing disease suppression in the plant. It may also be added to soil as a supplement to increase its biological activity.

At Marari Beach, all pruned leaves, affected vegetables, trunks of the harvested plantain shrubs etc. are subjected to composting and disintegration, through this process.
**Technical Details**

- Input material: Agro waste
- Maturation period: 45 days
- Worm used: Eisenia fetida and Eudrilus Eugenii
- Number of beds: 4
- Total area: 9.33 sq. mtrs (each bed)
- Revenue savings: Rs.1,20,000.00 per year

**Bio Gas Plant**

The food waste from our restaurant and kitchen is fed directly into the digesters where it undergoes decomposition. The presence of anaerobic bacteria in the digesters speeds up the digestion process. The end products are methane gas and slurry. While the methane gas is utilized in the staff mess for cooking, the slurry is used as bio fertilizer in the vegetable garden.

**Technical Details**

- Input material: Food waste
- Capacity: 250 kg
- No of plants: 2
- Output: Slurry (Bio Fertilizer) & Methane Gas (for cooking)
- Revenue savings: Rs.3,00,000.00 per year

**Bio Slurry**

The mixture of food waste and water which enters the Bio gas plant in semi liquid form is called ‘undigested slurry’. This undigested slurry undergoes a series of anaerobic digestion processes or fermentation in the Bio gas digester and is converted into a combustible gas called ‘Bio gas’. The residue after fermentation is in the form of a sludge called ‘digested Bio slurry’.

The composition of Bio slurry depends on the feeding and the amount of water added to the organic matter. When the feed is mixed with equal amounts of water, after digestion the composition of slurry can be recorded as water (85%) and dry matter (7%). The Nitrogen (N), Phosphorus (P) and Potassium (K) are the most essential nutrients for plants. The NPK content in liquid slurry is 0.25% (N), 0.13% (P) and 0.12% (K) respectively. Being fully fermented, Bio slurry is odorless and does not attract flies. It repels termites and pests that are normally found on raw dung. Bio slurry reduces weed growth by almost 50 percent. Not only is it an excellent soil conditioner, it also adds humus and enhances the soil’s capacity to retain water. Bio slurry is pathogen-free. All major plant nutrients (like NPK) are preserved during the fermentation process so that plants can easily absorb these nutrients. It can also be applied as ready-to-use manure. After being stored for a few days or mixed in a 1:1 composition with water, Bio slurry can be applied directly to vegetables or fruit crops around the household. Bio slurry application along with installation of regular irrigation channels is beneficial for the growth of vegetables especially root vegetables, paddy, sugarcane, fruit trees, and nursery saplings. Mushroom cultivations also thrive with Bio slurry application. Spraying Bio slurry can effectively control red spiders and aphids that attack vegetables. Dried digested slurry can also be used as feed supplement for cattle, pigs, poultry and fish.

At Marari Beach, around 350 litres of Bio slurry is generated every day from the Bio gas plant installed in the administrative section. It is used in the organic garden, both, as a nutrient to enrich the soil and for pest control. Consequently, the food we grow is healthy and nutritious, environment friendly and sustainable. Thereby fostering a culture of mindful eating.

**Sewage treatment plant**

We have installed a DEWATS (De-centralized Waste Water Treatment System) on the premises as part of our effluent treatment process. The installed capacity is designed to treat 55,000 litres per day. The process involves treatment of effluent initially through an anaerobic process and finishing with an aerobic process in the final stage. This final stage increases the oxygen levels in the treated water using a vortex system to improving the water quality and reducing unwanted odour. This treated water is further filtered through a pressure sand filter and an activated carbon filter before being reused to irrigate...
the entire garden. The quality of water is maintained as per the Pollution Control Board parameters. The sludge is cleared periodically and dried for further use as manure. All the waste water generated from the rooms and kitchen is treated through this process.

A Leaf out of the Watsan Park Story
Just a little under a decade ago, the plight of Alppuzha had been nothing short of dismal. The entire place looked like a vast waste dump with rotten garbage piled up by the roadsides. The canals and drains were clogged with bags of stinking waste from hotels, markets and meat shops. Heavy rains had flooded the area, spreading rot and dirt everywhere. Swarms of mosquitoes and flies had invaded the city bringing dreaded illnesses like Chikunguniya and Dengue.

Under these circumstances, the then elected representative Dr. Thomas Isaac (now the Minister for Finance, Govt. of Kerala) decided to try decentralized waste management. Under his leadership, many rounds of discussion were held among the various municipal authorities, councillors, residents’ associations and the leaders of all the political parties. A preliminary survey was conducted by women’s self-help groups to find out how citizens disposed the waste they generated and the requirements for project. A group of committed young staff of the municipality sanitation department took the lead. The campaign moved beyond the political divide.

In just two and a half years, all their efforts paid off and Alappuzha underwent a dramatic transformation. Today, the streets of this area are clean and the old dumping spots have virtually disappeared. The most surprising makeover is that of the biggest and dirtiest garbage dumping yard near Vazhicherry in the heart of the city. It has been transformed into a WATSAN (Water & Sanitation) Park with a small shed using six tanks (Thumburmuizhi aerobic composting model which can covert two tonnes of wet waste into compost in 90 days) where aerobic composting is done.

Taking a leaf out of the Watsan Park success story, we decided to create a similar system at Marari Beach. So we allocated a separate area that we called our Watsan Park and we use 4 processes.

1. The Bio digester for cooked food (Bio gas plant installed at the Administrative block)
2. Aerobic composting using the Thumburmuizhi model
3. Vermicomp post tank for raw food and plant waste
4. Raw food waste as fish food (pond in the organic garden)

Organic farming
The major occupation in Alappuzha is farming. Even as late as 1994, the practice of organic farming hadn’t caught up in India. But once Panchayat in Alappuzha went ahead and advocated the practice to its villagers, in an attempt to make the farmers self-reliant, today, this block panchayat called Kanjikuzhi, located on the shore of the Arabian Sea near Mararikulam, is the only vegetable-sufficient Panchayat in the state, and a prize-winning model for regions nationwide.

Every household in Kanjikuzhi grows its own vegetables and the villagers do not need to buy vegetables from the market at all. People here, use what they need and sell the surplus, so pensioners, homemakers and everyone else is able to derive income from their farming practices.

Inspired by the Kanjikuzhi model, we too practice organic farming at Marari Beach, integrating the garden to minimize the impact on the natural eco system. Farming at Marari is based on the needs of the earth as well as those of the human residents. The soil here, is loose and sandy due to the proximity to the sea; it is very humid and hot in summer with heavy rainfall during the monsoon, all of which makes year round vegetable farming difficult. Yet endemic vegetable cultivation has been made possible.

We sustain organic farming using traditional methods as well as innovative practices -
To overcome the lack of nutrients in the soil we use materials that are available or composted at site like dried leaves, bird droppings, vermin compost, Bio gas slurry and farmyard manure which is locally called ‘Jeevamrutham’ (nectar of life). By adding this Bio mass regularly, the organic carbon content in the soil has gradually improved and this has significantly boosted plant
growth. We allow the plants to self-seed and practice inter-cropping for diversity and natural pest control.

**Integrated farming System**

We use the principals of Integrated farming System (IFS) to sustain the development of agriculture with efficient soil, water crop and pest management practices, which are environmentally friendly and cost effective. In IFS, the waste of one enterprise becomes the input of another, thereby optimising the use of resources. In the Integrated Crop Livestock Farming System, crop residues can be used for animal feed, while manure from livestock enhances agricultural productivity. IFS also plays an important role in improving the soil health by increasing the nitrogen, phosphorous, organic carbon and microbial counts of the soil, thus reducing the need and subsequent use of chemical fertilizers. Moreover, IFS components are known to control the growth of weeds. The quality of water and its efficient usage in IFS is also far higher than in conventional systems.

**Vechur Cattle**

The Vechur Cattle (Bos indicus) is a rare breed of cattle, with an average length of 124 cm and height of 87 cm, it is the smallest cattle breed in the world, according to the Guinness Book of Records.

The Vechur cow was popular in Kerala until the 1960s, but became endangered when native cattle were crossbred with exotic varieties. In 2000, the Vechur cow was listed on the FAO’s World Watch List of Domestic Animal Diversity, in its ‘Critical-Maintained Breeds List’, pointing to imminent extinction since the number of breeding females and males showed a significant drop.

This particular breed of cattle is especially valued for the large amounts of milk it produces when compared to the amount of food it consumes. The milk is believed to have medicinal qualities and easy digestibility due to its distinct composition. The medicinal properties of the Vechur cow’s milk have been documented traditionally by Ayurveda and recent scientific studies have substantiated this. At Marari, we have 5 cows and 2 calves of the Vechur species. We use their dung as organic fertiliser in our gardens. However, we do not use the milk from the cows, as we ensure the calves get their full share of their mother’s milk. Other than cows the farm has Ducks, Gini fowl, Chicken and Fish to contribute in the process.

The Role and Importance of Ponds

Ponds are central to the life and prosperity of the whole eco-system in rural India. In fact villages originate around ponds. Rain water gets harvested naturally in ponds, getting stored up and recharging the ground water, thus serving as an indicator of the water table in the village. They have a profound cultural and historical significance because their sediment records are unerring narratives of the lives of our ancestors. They also play a crucial role in maintaining and encouraging the link between people and wildlife. Since time immemorial, there are numerous instances of village ponds that are worshipped by the villagers. Fairs and celebrations by the banks of the ponds, are a popular occurrence even today.

The innate value of the biodiversity of the ponds is based upon the three fundamental truths namely their status as a critical habitat for uncommon and rare species, their role as stepping stone habitats and their value as biodiversity hot spots. Marari Beach has a total 11 ponds. The total capacity of all of them together is approximately 40 lakh litres of water. The pond in the organic garden is home to special type of fish which feeds on food waste from the kitchen to offers nutrient rich water for the vegetation.

**Permaculture**

Our organic garden patterns and designs are also inspired from permaculture. With the success of this model, we have been able to inspire the villagers around to grow their own vegetables and have broken the myth that nothing can be grown on loose beach sand. We grow more than 30 varieties of vegetables, most of them being native vegetables with the addition of a few western vegetables like cabbage, cauliflower, broccoli and carrots.

**The Yield for the year 2017-2018**

| 1  | Arbi-chemb  | 96.00 |
| 2  | Baby corn   | 22.00 |
| 3  | Banana flower | 83.75 |
| 4  | Banana leaf | 85.90 |
| 5  | Banana-butter-big | 37.00 |
| 6  | Banana-butter-small | 347.50 |
| 7  | Banana-kappakkali | 507.00 |
| 8  | Banana-kathali- | 10.00 |
| 9  | Banana-nendran-raw | 24.00 |
| 10 | Banana-nendran-raw | 10.00 |
| 11 | Banana-red poovan | 43.00 |
| 12 | Banana-robesta | 4.00 |
| 13 | Banana-robesta-yellow | 10.00 |
| 14 | Beans-avari | 1.00 |
| 15 | Beans-broad | 11.50 |
| 16 | Beans | 5.50 |
| 17 | Beans-long | 44.90 |
| 18 | Bilimbi | 0.50 |
| 19 | Bitter gourd | 20.50 |
| 20 | Bottle gourd | 20.00 |
| 21 | Brinjal-long | 7.50 |
| 22 | Brinjal | 808.20 |
| 23 | Cabbage | 19.50 |
| 24 | Capsicum-green | 3.00 |
| 25 | Cauliflower | 17.70 |
| 26 | Chilly-green | 59.45 |
| 27 | Coonu | 8,840.00 |
| 28 | Coriander leaves | 0.10 |

**Total veg & fruit - 27,709.75 Kgs**
Farm Kitchen Experience
Our Farm Kitchen is located in the middle of our organic farm where native vegetables and fruits are grown under the supervision of local farmers. The experience includes a walk around the garden to harvest fresh vegetables, an introduction to the ingredients, dishes and recipes, cooking with the chef and eventually, dining. It is a unique and interactive dining activity where you also get to mingle with other like-minded people. The tender loving care that the farmers shower on the plants, the freshness of the produce, the organic cultivation and the local way of cooking creates an experience that is authentic, immersive and transformative. Something that inspires people to take back with them, the resolve to grow vegetables back in their own homes.

Aquaponics - An experiment
The soil around the village of Mararikulam is predominantly loose. As the area also traditionally has a lot of water bodies like ponds, we have embarked on an experiment to find out if Aquaponics could be an alternative way to grow vegetables or to create a kitchen garden. Aquaponics is a combination of Aquaculture and Hydroponics. The water from the tank is run through the walls where plants are grown in a tray with soilless medium. The water flow is continuous but the plant absorbs less water than if it were planted in soil. The waste from the fish provides the required nutrients for the plants.

At Marar Beach, we have set up Aquaponics installations at two locations. The first area used for the installation was a de-commissioned cooling system once used for air-conditioning in the resort, which became a wild garden due to disuse. Certain modifications were made but once installed, the place has transformed and become an inviting arbour of relaxation where guests can spend time, gazing at the fish and hearing the water flow. A fish tower, also called an inverted aquarium was also installed to enhance the au naturel ambience. Here, we have also been able to successfully grow ornamental plants.

The second area we identified was located beside the pond in front of the shop. We reused the empty shells of the pressure vessel that was once part of the pressurised pneumatic fresh water distribution system. Once the pressure vessels were de-commissioned, they were cut in half and used as two hydroponics tanks where the water from the ponds was circulated in a soilless medium. Tomatoes, chillies and red spinach are currently being grown in these tanks.

Drinking water plant and single use plastic
On the 21st of February 2017, we began the practice of offering safe drinking water to our clients using glass bottles in order to reduce our dependence on single use plastic. Every year we would end up using over 100,000 bottles (plastic) of packaged drinking water provided for use in the rooms. With this new facility, we are now able to hygienically package drinking water that has been treated using Reverse Osmosis technology in a controlled environment. The glass bottles used for packaging are sterilized so that it may be reused safely. This has enabled us to bring down the plastic waste that we generate considerably and we deem this as a significant milestone in our commitment to conservation. We offer this drinking water bottle in the rooms as against the commercial single use plastic packaged drinking water which guests can opt for on a chargeable basis.

Following this project, we also replaced plastic straws with paper alternatives thereby further reducing single use plastics.

WATER CONSERVATION
We are all aware of the fact that potable drinking water is all set to become a scarcity. Through water conservation, we aim to reduce the use of fresh water through technological and social methods. The goal of water conservation is to provide sustainability or in other words ensure the availability of potable water to future generations. This translates to the principle that the withdrawal of fresh water from an eco system should not exceed its natural replacement rate. The solutions include:

- Through human engagement
- Through Technological know how
- Catchment management
Through Human Engagement
At Marari Beach, we offer every guest the choice to send their linen and towels for laundry every day or to stagger it to once in two days. Every room has a card with this message printed, for the kind attention of the guests. We have also put up a board with details of the quantity of water consumed while performing day to day chores and suggestions on how the consumption can be reduced. Apart from this, other measures we have taken in this regard include:

- Generating awareness of the calamities caused by water scarcity.
- Educating the staff on the various ways of conserving water during their work. The staff have an organization within them named the Green Task Force, the members of which take responsibility for such activities.
- Educating the hotel guests on the various ways of conserving water during their stay by means of informative leaflets and tent cards.

Through Technological Know How
- We have optimized pressure in the Pneumatic freshwater distribution system so that water is not wasted.
- Shower heads and wash basin taps are water efficient thereby conserving water.
- All waste water is recycled through our sewage treatment plant
- We ensure usage of sprinklers and effective time management for gardening i.e. sprinkling in the nights, causing less water to evaporate.
- All the natural water bodies on our property are adequately distanced from the high tide zone
- For farming, raised beds are used with the help of waste material which help in retaining water in the soil
- Use of Aquaponics in farming thereby reducing water consumption of the plant.
- We ensure that we do not draw any ground water for regular use up to 500 metres from the sea
- Ground water recharge pits are provided in many areas so that the water table is maintained

Catchment Management
- Rain water harvesting is practiced at the administrative block and the water collected is stored in a tank to be used for hotel use.
- Retaining all the natural water bodies on the property, including 11 ponds which are looked after and maintained in excellent condition.
- Soak away pits ensure that the quality of the ground water is maintained and the water penetration is better through the pit. The pits have a depth of 5 feet from the ground level.

Technical Details of Rain Water Harvesting

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<tr>
<td>Roof water collection</td>
<td>1000 Sq.mtr</td>
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</table>

ENERGY CONSERVATION
Our most important contribution to the conservation of electricity has been that we have not installed air conditioning in the lobby and restaurant. These areas have an open design thereby permitting natural draft cross ventilation, reducing indoor temperatures. The use of Thatch on the roofs helps reduce the temperature indoors.
- Windows are equipped for cross ventilation, allowing the guest to enjoy the tropical weather and reducing the use of air conditioning, thereby saving energy and prolonging the life of the AC equipment.

Other initiatives include:
- Production of bio cooking gas which saves usage of up to 1 cylinder of lpg per day.
- Improvement in the power factor (maintained at .99) which in turn has improved the line voltage reduced the contract demand and current, accounting for a savings of up to 3000 units per month.
- Implementing solar water heating panels for hot water generation, the back up energy source in the absence of sunlight is LPG based water heaters. The distribution of the hot water lines has been redesigned to reduce line loss and the lines have been insulated to provide efficiency. At various return points, we have installed sensors to detect temperature drop. Only when the temperature drops will the return line work, again increasing efficiency.
- LED lighting throughout the resort has resulted in a saving of 300 units a month.
- Use of energy efficient Inverter Air-conditioning has also helped in saving energy.
- The installation of Variable Frequency Drive based hydro pneumatic pressure control system for fresh water distribution has helped bring down the electricity load considerably.
- The Green Task Force creates awareness on power saving and monitors the usage to check for power wastage.
- By turning off the main switch in the room, all the lights in the room will be switched off, thereby saving power when the guest is not in the room.

POLLUTION CONTROL

Noise Pollution
- The generator room is acoustically padded (double shutter) in order to avoid polluting the environments and the decibel levels of the generator are constantly monitored.
- No usage of loudspeakers or loud music in the hotels open areas (the restaurant is exempt during live Indian classical music performances).
- Motor vehicles are not allowed beyond a point.
- The Kitchen exhaust system has acoustic enclosures.
• To avoid noise pollution we use only silent air conditioners.
• Televisions have not been provided in the rooms.

Air Pollution
• The chimney of the incinerator and generator is placed at a height of 20 meters above ground level and all emissions are constantly monitored.
• As most of the waste is recycled the usage of the incinerator is nominal.
• All the pest control measures for the hotel too are purely organic.
• Bicycles are provided for guests as well as staff, for short trips or visits to the village.
• The entire installed air conditioning system is non-CFC.
• We have switched from Diesel fuel to gas for all backup heaters for hot water generation as it is a much cleaner fuel with lesser to nil emissions.

Water Pollution
• As the sewage and the food waste are recycled through various processes, the chances of water getting polluted are minimal.
• Periodic maintenance of the ponds ensures the water remains non pollutant even though stagnant. The presence of several species of dragon flies and damsel flies ensures the purity and the cleanliness of the water.
• The use of Aquaponics in our ponds ensures adequate circulation and keeps the water clean and hygienic.
• We use only non-phosphate detergents.
• We do not use any chemical fertilizers. With the abundance of organic manure that is generated from our own waste, we are able to meet all manure requirement.

Afforestation
Every year, the CGH Cell conducts various programs stressing on eco conservation within and outside the hotel. The cell mostly visits the local schools where children are educated on the benefits of afforestation. We also encourage our guests to plant trees on the hotel premises. Most of them are frugivorous plants which attract numerous species of birds. This year, 1000 saplings were distributed to the local school to be planted in the village.

Within the hotel premises, several plants and saplings were planted by our guests and our own staff members.

ECO-FRIENDLY PRODUCTS
• All guest stationery is made from unbleached recycled paper. Natural fibers like Coir and Screw pine are extensively used. Curtains in all rooms are made of pure cotton.
• We recycle used white paper, mixed paper, news paper and cardboard to make carry bags, envelopes, scribbling pads & laundry bags.
• All decorative material like flower vases, wall hangings, artwork, ashtrays curry pots, and dustbins are made from eco-friendly material like Ceramic, Terracotta, Bamboo, Coconut products etc.
• We promote and support local self-help groups who make indigenous local art and crafts using Bamboo, Screw pine leaf, grass, weed and coconut to make mats, curtains, coasters, folders, etc.
• All the guest amenities provided in the rooms are eco-friendly and sustainable.
• Even the pens used in the room are recyclable and have a seed in them.
• Inja, a medicinal plant fibre is also a natural scrubber and so we have created unique scrubbers that have been made available for guest use. This is a classic example of a traditional concept being adapted for modern times.

Innovations
• We have ensured that the buildings and structures have been designed with shallow foundations, ensuring no disturbances to the existing ground water.
• All building structures have been constructed at heights not exceeding 9 metres from the ground.
• During the construction no sand was excavated or removed from the site.
• The built up area of the hotel occupies less than 5% of the entire land area.
• The cottages are independent, single storied with low thatched roofs designed along the theme of a local fishing village.
• The cottages have been laid out and built around the existing trees on the property. A whole lot of additional trees and shrubs have been planted. Currently there are around 20000 trees and shrubs within the premises.
• No construction has been undertaken on the land from the high tide line up to 200 metres inland.
• We have used cane and old recycled wood in most of the habitied areas and we have also preserved the antique areas, room furniture, etc.
• We encourage the philosophy of ‘Just in time’ and ‘Fresh in Fresh out’, to manage our inventory more efficiently.
• We welcome every guest with a refreshing drink of tender coconut and we also have several healthy herbal drinks on the menu in the restaurant.
• The beach is left undisturbed and there is no building in the near vicinity from the shore. We clean the beach and avoid activities like motorized water sports. Vendors are strictly kept away from the beach. We regularly plant trees to avoid soil erosion.
• All the public areas including the lobby, restaurant, shack, grill etc. are designed as open constructions, facilitating cross ventilation and negating the need for air conditioners. The designs are inspired from the local style of architecture.
Roofless bathrooms in all the cottages help in providing fresh air circulation and direct sunlight helps in saving energy.

We grow our own organic herbs and tropical vegetables to promote the philosophy of "Grow your Own". Mint, peppermint, curry leaves, lemon grass, basil, khus khus grass, ladies finger, pumpkin, yam, bitter gourd, Ash gourd, etc. are all grown here.

The Butterfly Garden is an area of natural vegetation which covers an area of 8000 sq ft. As insects are the indicators of the health of an ecosystem, the butterfly population of Marari beach will suffice to ratify our eco-friendly ethos. We have identified over 96 species in our garden. The butterflies are attracted by introducing specific larval host plants and nectar plants. We are proud of the fact that our garden is home to the largest 'Southern Bird Wing', and 'Blue Mormon', the largest swallowtail butterfly of South India. The list of the identified species is included as annexure.

The hotel also boasts an Insect Corridor which consists of a strip of growing plants one meter in width. Whenever ground clearing works happens, it disturbs the natural environment of the insects. This strip of vegetation or corridor provides refuge for the insect and helps to protect the insect population. The strip contains several indigenous plants like Leucas, Tridax. Insects like grasshoppers and smaller species of butterflies depend on these plants and due to their concentration in these strips, their predators, birds and lizards can always be spotted around these plants. We also have large communities of robber flies, bee flies, wasps, dragonflies etc. that flutter in and around the insect corridor.

The pesticides we use in the vegetable garden are prepared organically, using Neem Oil, Garlic Extract, Wild Mint and other natural essential oils. We also use Lemon grass oil and Eucalyptus oil in an organic spray that repels pests. Indian Albanam (Kundirikkam) is used in fogging pots to keep mosquitoes away.

Kerala is home to a variety of plants that have medicinal properties as defined by Ayurveda. At Marari, we maintain an Ayurveda Garden with over 83 varieties of medicinal plants grown. At the Ayurveda kitchen, we prepare medicines like Dhanvantaram Kuzhampu, and herbal bundles for Pathra Swedam using these plants.

We take great delight in maintaining a fragrant Jasmine Garden over an area of 10,000 sq ft. We grow over 240 Jasmine bushes from which flowers are collected every evening and used for room decorations. The garden meets 60% of our annual requirement. Bio gas slurry and other compost are used as manure here. We also grow indigenous flowers like Hibiscus, East Indian Rosebay etc.
OTHER HIGHLIGHTS

- When the land for the resort was purchased, it was predominantly coconut trees. Today, we have a variety of fruit trees that have matured and have become a welcoming habitat for several species of birds and small animals.
- Every day, we conduct a touring program called the ‘Environmental Tour’ where all the resident guests are taken for a tour by the Naturalist to familiarize them with our environment and environmental friendly practices.
- The resort uses the help of Local Farmers from the village to maintain and look after the vegetable garden. Chellappan is one such experienced farmer whose expertise is used at the organic garden. He uses traditional methods from the area and has been instrumental in making the organic experience a success at Marari.
- We use a Coconut Crusher to crush used tender coconut shells which can be composted after treatment.
- Within the premises of the Marari Beach, we use electric rikshaws and e buggies to transport material. These are also used to help guests move around thereby reducing pollution. Strong messages exhorting a ‘Walk back to nature’ and emphasizing the need for the conservation of energy and nature, are exhibited on all possible spaces, including junction boardings, interior signage boards, inside rooms, on palm leaves, by the road side, etc.
- In order to avoid the use of modern plastic/thermocol and colored paper, we have adopted the village culture. So we use coconut & palm leaves to decorate the buffet counters, our pathways are decked with palm leaves, and we make festive arches with banana stems and fences with dried coconut leaves.
- Introduction of energy efficient systems using systems like key tags, variable speed drive systems for motors, microprocessor controlled kholer generators, replacing filament lamps to LED in public areas and rooms and use of dish washing machines for washing crockery and cutlery.
- Activities like village walks and bicycle tours are offered to the guests to encourage them to explore the vicinity to get a first-hand experience of village life.
- All Christmas decorations are made of recycled, naturally sourced, local materials. Every year, the staffs themselves come up with unique concepts and ideas to decorate the resort and the guests never fail to appreciate our efforts. These activities and the positive feedback always boost the morale and motivation of the management and staff and facilitate better bonding within the team members.
ADOPTING THE LOCAL ETHOS

The residents of Alleppey enjoy a close affinity to nature and prefer simple, healthy and peaceful lifestyles. The traditional attire of the people of Alleppey is white Mundum Neriyathu, a plain white Dhoti with gold or coloured borders for men and cream coloured woven Kasavu Sarees with gold borders for women.
The cuisine of Alleppey can be categorised as typical Kerala cuisine primarily consisting of rice and fish. The economy of this region is mainly based on agriculture, backwater fishing, shell collection, coir-based industries, handlooms and handicrafts, and increasingly tourism.

The art, culture and customs of the people of Alappuzha district are not very different from those of the local people in the neighbouring districts of Central Kerala. The folk songs in the fields during sowing and harvesting, the morning wake up songs by the Panans, and traditional dance forms associated with festivals like Onam can still be heard and viewed. It is believed that Thullal an art form propounded by Kunchan Nambiar had found its stage in the famous Ambalapuzha temple. Unfortunately, a substantial number of art forms including folk dances, dramas, and folk-songs have faded into oblivion. Perhaps because of society’s resolute march towards social transition brought about by the spread of communism and the growing social consciousness of the lesser privileged class.

This can be clearly seen with the small community of Ullada tribals who no longer follow their own traditional tribal way of life, but instead, have become one with the rest of the society.

Alappuzha has contributed its might to the development of Malayalam language and literature. Two stalwarts of Malayalam literature namely Sahitya Panchanan P.K.Narayana Pillai and Thakazhi Sivasankara Pillai hailed from this district. The great linguist and grammarian, I.C. Chacko, was also born and brought up in this district. Interestingly, even the first cinema studio in Kerala was started in Alappuzha district.

Apart from the common Indian festivals celebrated here, the traditional Kerala festivals celebrated here include vishu and Onam. Onam is Kerala’s biggest festival and it falls in the month of Chingam according to the Malayalam Calendar which coincides with August or September as per the English Calendar. A unique event during this time is the Snake Boat race – an amazing spectacle sport that draws visitors and locals from far and wide to throng the shores of the backwater.

By and large, a snake boat is ridden by 4 helmsmen, 25 singers and 100 to 125 oarsmen who row the boat to the stirring rhythms of the traditional boatmen song known as ‘Thevanchipattu’. Innumerable onlookers gather at the edges of the rivers or backwaters and cheer the boatmen as the enormous snake boats skilfully slice through the waters. Snake boats or Chundan Valloms were once used to transport soldiers in large numbers swiftly during times of war. The Nehru Trophy Boat Race held on the second Saturday of the month of August is regarded as one of the most competitive and popular boat races in India.

Other festivals celebrated in Alleppey include The Mullackal Chirap, Ambalapuzha Temple Festival, Adoor Gajamela, Chettikulangara Bhagavathy Temple Festival, Theyyam Festival, Sree Krishnaswamy Temple Festival, St. George’s Church Festival, Kadamanitta Padayani, Champakulam Moolam Boat Race, Neelamperoor Padayani, Champakulam Church Festival, Chithira, Mannarasala Serpent Temple, Harippad (October/November), Chirappu Mahotsavam, Kidangamparampu Temple (December), Chandanakudam, Kakazhom Juma Masjid Arthungal Perunnal (January), Edathuwa Perunnal (May), Thompol Church Perunnal Chettikulangara Kettukazhcha (February/March)

Local in content
We believe in a participative ethos that draws both inspiration and wisdom from the cultures that surround us. Each CGH Earth unit draws inspiration from the surroundings and takes its shape incorporating the sense and feel of the place and its people. It encourages the traditional values of the place and keeps alive the culture through its offering and experiences. Some of the measures adopted by Marari beach to conserve the cultural heritage of the area is listed below

- The cottages are designed as fishermen’ huts
using locally available laterite stones and are thatched with coconut leaves. Terracotta floors, red oxide polished portico, lime washed walls, etc. keep the culture & heritage of the village alive.

- The Club House is a 200 year old wooden house centrally located on the resort, which has been restored to its original architectural glory. Now, we use it as a permit room for guests.

- Mararikulam is a land of ponds and even its name is derived from two words – Murari (another name for Lord Shiva) and Kulam (meaning pond). A traditional ancestral home or Tharavadu always had at least 3 ponds. One fresh water pond for drinking water, a pond for bathing and another for husk retting. Marari Beach has taken this practice forward. Here, ponds and wells are maintained in the traditional way with fresh water fish and plants that sustain its eco system.

- The existing fishermen’s huts on the resort have been restored and are now used as staff accommodation.

- Several natural canals run through the village and the presence of fish and natural plants living in these waters, helps maintain the quality of water. The canal is preserved in its most natural form.

- The resort promotes the use of traditional attire as uniforms for the staff. While the ladies wear Saris, the gents wear Dhotis. We even promote the use of traditional wear for our guest by providing sari and dhoti demonstrations.

- Ayurveda is coined from two words - Ayur meaning life and Veda meaning science. This intricate practice of healing is the world’s most ancient healing system and is indigenous to Kerala. The Ayurveda center at Marari Beach offers authentic Ayurveda treatments under the prescription of our in-house doctor. The hotel also has an Ayurveda garden where herbal plants are grown and used to make medicated oils and herbal concoctions in our Ayurveda kitchen. Ayurveda diets are also offered to the guests availing treatments at the center.

- The practice of Yoga is considered as beneficial for the mind, body and soul. And hence, Yoga has become an intrinsic part of healing for an individual dealing with stress and lifestyle ailments. We offer individual sessions for guests in need of Yoga classes with the help of a full time yoga Instructor at the resort.

- The menu at Marari Beach is curated to offer an experience of ‘Coastal cuisine’ which is a compilation of dishes inspired not only from the local fishing village but also exploring the cuisine of other fishing communities across the coast of Kerala and the Konkan belt.

- Our Chef pays frequent visits to the village to develop new recipes inspired by the local fishermen. This, in turn, is reproduced at the Marari kitchens, thus faithfully upholding traditional flavours and cooking styles.

- All the rooms of Marari Beach have partially open roofs in the toilets. The experience brings oneself closer to nature especially during the monsoons. The flow of fresh air provides for a healthier environment.

- Inja is a traditional body scrub which is made from the crushed fibers of the Soap Nut Tree. It has immense medicinal value and deterrent quality. Introducing this unique and local product to our guests gives them an insight into traditional methods of exfoliation and hygiene practices followed traditionally.

- We organize performances of ritual art forms and traditional folklore for our guests, giving them the opportunity to experience the cultural vibrance of the local communities. Traditional Kerala art forms like Kalamzathu, Mudiyettu, Kavadiyattom, Theyyam, Puli-kali etc. may sound like tongue twisters, but the sheer visual spectacle makes them unforgettable experiences.

- We also promote local festivals and events like the Snake Boat Race, Temple festivals, Onam, Vishu etc. We do believe that by creating joyous occasions out of these special days, we are promoting our culture and traditions and also creating memories our guests will cherish forever.

- The Chaya Vandi or the traditional wayside roll away tea shop that we’ve introduced in the hotel rolls out hot Chaya and Kappi (Tea & Coffee) every evening. The ‘meter long tea’ is a specialty not to be missed since it is prepared by the local tea master from the village. Local snacks are also provided, so every guest gets a complete experience of evening tea, in true Kerala style!

- Marari Beach is also a destination of choice for weddings when the bride and groom wish to get married in the traditional way. We take great delight in re-creating the authentic local ambience for nuptials conducted here.

- During the olden days, vendors used to carry products and produce on their heads, all the way up to the nearby market. The Athwani was the typical support provided to porters and the presence of Athwani helped them to unload and rest for a while. With the advent of modern transport, there is no longer any requirement for the Athwani. We at Marari have kept remnants of it to keep alive the sense of history.

- A Tulasi thara is found in most traditional houses. Tulasi is an auspicious as well as medicinal plant with several useful qualities as a natural insect repellent and air purifier. Circumambulating three times round the Tulasi Thara is considered to bring good luck. We too have a traditional Tulasi thara and every day a Nilavilaku or lamp is lit at the reception, restaurant and at the Ayurveda center.

- To welcome a guest at Marari Beach, an Aarti and teeka is offered, it symbolizing the belief of touching the soul of a person. Athithi Devo Bhava or Guest is God is an age old saying that is practiced every day at Marari Beach.

- Fish landing trips are offered where guest are taken to areas where the fishing boats return to land their catch of the day. It’s an immensely exciting activity to watch the fishermen as they land and auction the fish that is caught.

- Village walk is a tour of the village led by the naturalist. During the course of their walk, the guests get a glimpse into various aspects of village life.
INCLUDING AND BENEFITING THE LOCAL COMMUNITY
The Fishing community around Mararikulam

Alleppey has a coastline of 82 km. from Veliyazheekal to Pallithode. There are about 4,510 traditional fishing crafts operating in this area, spread among about 30 fishvillages. Only small-scale, low-technology, low-capital, fishing practices are undertaken by individual fishing households of coastal or island ethnic groups as opposed to commercial companies. These households make short fishing trips close to the shore. Their produce is usually not processed and is mainly for local consumption and sale. They mostly use cast nets, and small traditional fishing boats called Valloms.

The community around Marari Beach consists almost entirely of fishermen. Years of unsustainable fishing practices and overfishing have depleted their resources, challenging the very existence of the community. The arrival of tourism has benefited the community to a large extent, as it has provided an alternate source of employment. Marari Beach was the first to be set up in the village and as it has now completed 20 years, there are at least 85 small and medium establishments ranging from homestays to luxury hotels.

Including and benefiting the Local Community is one of the core values of our parent company, CGH Earth. At CGH Earth, this is a matter of providing more than just employment. Rather, providing understanding for their perspectives and sharing with them as a family. In the 20 years of its operations, Marari Beach has contributed to developing the community in several ways. Some of the practices are highlighted below:

Staffing

- Garden Maintenance: The Organic garden and the main garden of the hotel are maintained by the local fishing folk.
- Skilled Laborers: 60% of the people employed at the resort are locals from within a vicinity of 10 km.
- The Beach Guards are immediate neighbors of the hotel and they enjoy the opportunity to work all year round.
- Thatching: All the 62 villas are thatched annually, providing employment opportunity for people including ladies who weave the coconut leaves, transport them to the site and finally do the thatching.
- Coconut Harvesting: The hotel has more than 1750 Coconut trees that have to be harvested every 45 days.
- Organic Farming: We ensure year round employment of unskilled labor to carry out our farming activities.

Community Involvement Projects

- The resort maintains a regular rapport with the local school, extending help in building awareness on nature conservation, pest and population control, organic and herbal gardening etc. and implementing student welfare schemes and student support programs.
- Looking at the plants and gardens grown at Marari Beach over the years, the villagers have begun to grow other fruits and vegetables in addition to coconut plantations. Like Papaya, Mango, Plantain and Ladies finger.
- Our Chefs get first-hand information of the local cuisine by interacting with the local ladies from the village.
- Regular medical camps are conducted in association with The Self Help Group of Mararikulam. Apart from sponsoring daily newspapers to the village library, St. Augustine High School has been provided with fans, public address system, roofing for the auditorium, etc. by the hotel.
- There are programs conducted to train village girls and boys in various departments of hospitality like housekeeping and kitchen.
- The presence and functioning of Marari Beach indirectly benefits the local taxi and tuk tuk drivers, the local tailors who stitch staff uniforms, skilled craftsmen and shops and other vendors around Mararikulam. Graduates are trained to take on the opportunity to serve as local guides.
- The philosophy of Local in Content and Catch of the Day is followed to a T. The purchase of fish from the fishermen of the beach enables us to give them the best price and serve fresh fish to the guest on a daily basis.
- All the cultural programs at the resort are performed by the artists from the locality.
- The hotel maintains a couple of general information sign boards in the village.
- Catch them when they are young. Marari Beach believes that change in the world can only be achieved by changing the younger generation. At the village level, the local schools helps us in our endeavor to educate children in aspects of Hygienic Practices, Environment Friendly Practices and overall development of their personality so that they become better citizens of the country.
- In times of calamities, the Marari Beach provides help to the villagers in the form of food, financial assistance, clothing, education material etc.
- Women’s Cell: This is an initiative of the women contingent at the resort. The ladies meet once a week and conduct sessions on Spoken English, Grooming, Hygiene etc. Visits to the neighboring Juvenile home, interaction with the inmates and providing monsoon wear, etc. were also undertaken as Social initiatives.
- The resort encourages local artists and musicians to perform at Marari Beach. Benny and Antony, a musical duo have been performing at the restaurant every day since our inception. We also offer music lessons to interested guests through Benny.
- Supporting local families: The introduction of the natural soap ‘Inja’ and the custom of giving tender coconut water as welcome drink for all guests, promoting local products sourced from local families.....these are all on-going processes of community revival.
- ‘Vitnijana Kala Vedi’ and Marari Beach jointly conducted a week long Artists’ camp for the local young artists and for talent from across South India. The talent discovered here, has been showcased to the word through exhibitions of the paintings done by these artists, both inside and outside India.
SOCIAL RESPONSIBILITY INITIATIVES

A history of Social Responsibility
In the year 2007, the then Central Minister of Agriculture, Sharad Pawar, during his stay at the resort envisaged the need to provide care to the major wealth of Kerala - its Coconut Heritage. This led to an experiment being conducted by The Coconut Development Board, on the trees of Mararikulam for 62 acres of village land, including 25 cents of the resort. The program was officially inaugurated by The Coconut Development Board Chair Person Mrs. Mini Mathew, in the village followed by planting of sapling by the local Panchayat President at the resort. The main objectives of this program were
- Replanting of trees destroyed due to the following reasons
  - Rhinoceros Beetle attack
  - Lightning attack
  - Aging
Rejuvenation of the existing trees by usage of effective organic manure like Neem cakes, bone powder, cow dung, nitrogen fixing plants.
The experiment was completed over a period of one year and the results were shared with the villagers. The remaining coconut trees in the resort were also treated, based on the results of this experiment.

Christmas decorations
Chekutty dolls (2018)
Handloom weavers at Chendamangalam in the Ernakulam district thought that they had lost the only source of their livelihood when the floods of 2017 destroyed their weaving units and washed away all their stock and raw material. That was when two social entrepreneurs in Kerala created a handmade doll that became a symbol of hope for entire communities of weavers. Chekutty or Chendamangalam Kutty was the name given to the dolls made from the garments at Chendamangalam that were soiled and destroyed during the 2017 floods. 360 Chekutty dolls could be made from a single saree.
The Chekutty initiative became a wholly volunteer-driven program. Even the Kerala Chief Minister, Pinarayi Vijayan, came forward in support of the initiative. Every year for Christmas, CGH Earth hotels uses only natural handmade materials to decorate the property and celebrate the festive season. In 2018, we used the Chekutty doll for the Christmas tree at Marari Beach as a symbol of the support and respect to the Handloom weavers of Chendamangalam.
**Paper Butterflies (2019)**

Christmas of 2019 saw paper butterflies flutter their way into Marari Beach. The decor at the reception was inspired from nature using paper butterflies on the Christmas tree and as decorations. At the Chakara restaurant we used a discarded fishing net to create a tree with the Chakara (catch in the net) in it. Most of the decorations were made using paper. Some of them were made using recycled paper while we used bamboo, dried casuarina fruit, coir, discarded foot mats, jute thread to make a few eco friendly and unique decorations.

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**Monetary Contributions / Sponsorships to Community Initiatives**

- Various contributions were made to community sports events at Mararikulam and Polletai areas.
- We contributed a sum of Rs.60,000 for the Annual Snake Boat Race – Alleppey, 2018 as it was also a fund raiser for relief work in the flood affected areas.
- A music system was purchased for the St. Sebastian’s Church, Mararikulam.
- A variety of sports equipment was purchased for the students of Mararikulam school.
- 10 cents of land was donated for building an Anganvadi in the village.
- Contributions made to Mararikulam School include:
  - New building for the school
  - Cycle shed
  - Compound wall
  - Toilet block at school
  - Computers for the school
  - Note books to students
- A piece of land was donated to building a Library in the village
- Two toilets constructed for villagers who were in need of it
- Marari beach actively participated in the relief for Tsunami survivors
- In 2019, Marari Beach also contributed material to build a house for Mr. Francis Puthenpurackkal, Mundampalli, Alappuzha.
World Environment Day (June 5th 2017)

On the eve of the World Environment Day, Marari Beach associated with the St Augustine school at Mararikulam with a task to plant fruit trees across the village. Nearly 1000 fruit trees were planted by the students who were also encouraged to take care of it. On this day, a Green Task Force was also formed among the students who were empowered to promote awareness on environment sustainability and the importance of keeping the area clean. The event at Mararikulam was organized in association with Responsible tourism Kerala, Kerala Tourism and KTM society. The program was inaugurated by Shri Priyesh Kumar, President -Mararikulam Gram Panchayat and the Keynote address was delivered by Shri Rupesh Kumar K, State coordinator - Responsible Tourism, Kerala. Others who presided over the program were Shri Jose Mathew, Secretary -KTM Society and Father Solomon, St Antony’s School.

World Environment Day (June 5th 2018)

Students of the high school were invited to the resort, where they were introduced to the various environment practices that the resort follows. Special awareness classes were conducted as follows

- Mr. Radhakrishna Shenoi, General Manager of Marari Beach spoke on the impact of plastic waste in modern times
- The naturalists of Marari Beach, Shibu Bhasker, Vishnu and Arun conducted a session on recycling common plastic material found around us including a practical demonstration by Shibu Bhaskar on how it could be reused.
- Sajith conducted a session on organic farming

World Environment Day (June 5th 2019)

Marari Beach joined the St Augustine’s church. Mararikulam and conducted a cleaning drive for an area of 1 kilometer of beach road. Around 100 persons including the staff of Marari Beach and members from the parish collected plastic waste that was strewn on the roadside. Around 30 sacks full of plastic waste were collected and sent for recycling to Green Fields, Ettumanoor.

World Ocean Day Celebrations (June 8th 2019)

Marari Beach associated with Ocean society of India HQ Kochi, represented by their members and officials from CMLRE, to conduct a day long program on Beach Conservation and Marine Life Awareness. Around 90 students from SN College Alappuzha, VHSS Kanichikulangara, St Augustine High school along with teachers and committed fishermen from the area participated in the event. Among the speakers were Scientists and Professors from the Centre for Marine Living Resources and Ecology and Ministry of Earth Science, Kochi. Following the program, a beach cleaning drive was organized and 15 sacks of plastic waste were collected from the beach.

Training in Organic Farming June 5th 2018 – 14th October 2019

On June 5th 2018, a course on organic farming was launched in association with the St Augustine school where select students were offered a course in organic farming at Marari Beach which would extend from 5th June 2018 to 14th October 2019. The course was offered on the premises of the Farm Kitchen, by Sajith, an agriculturist from the area, along with the farmers of Marari Beach, who would teach the students the basics on organic farming over several classes spread over 24 sessions. This was done in order to spread awareness on the importance of organic farming and to have more and more people practicing it in the village. The students were also gifted a jute bag each with a message to use it instead of a plastic bag.

The 14 month program culminated on the 14th of October 2019. The students who attended the training were presented with certificates along with garden tools, organic seeds for varieties of vegetables and a jute bag that they could use to replace plastic bags. Sri Dayal a noted environmentalist and a promoter of organic farming spoke about organic farming and about eating the right kind of food. Other noted persons who graced the occasion were Fr Nelson of St Sebastian’s church, Mararikulam, Smt Treeas Rani, Headmistress of St Augustine’s school and prominent farmers from in and around Mararikulam.
OTHER ACTIVITIES

Marari Beach associated with the Cochin Bikers Club to organize a Cycle Rally on Indian Republic day (2018) from Casino Hotel, Kochi to Marari Beach. The ride was organized as a fund raiser to lend support to Deepti School for children with special needs located at Mohanma. The funds raised were also used to purchase musical instruments for the school band.

We encourage property visits from various schools and colleges in and around Alleppey to showcase our environment practices and our organic garden and every year, we have students visiting from Mararikulam School, St Joseph School and St Michael’s College Alleppey.

Kerala Floods 2018
On 16 August 2018, severe floods affected the south Indian state Kerala, due to unusually high rainfall during the monsoon season. It was the worst flood in Kerala in nearly a century. Over 485 people died, and 140 were missing. About a million people were evacuated. All 14 districts of the state were placed on red alert. According to the Kerala government, one-sixth of the total population of Kerala had been directly affected by the floods and related incidents. The Indian government had declared it a Level 3 Calamity, or "calamity of a severe nature". It is the worst flood in Kerala after the great flood of 1924.

Kuttanadu is considered the Rice bowl of Kerala and about 40% of the people here are involved in agriculture. Almost all of Kuttanadu is about 0.6 to 2.2 metres below mean sea level. These low-lying areas have been prone to flood normally during monsoon and in 2018, the area was one that was affected the most. The people of Kuttanad were evacuated and relocated to camps close to Mararikulam and marari beach actively participated in assisting and rehabilitating the people who were shifted to relief camps in the area. Marari beach supported in the form of-

Food packets – 2500 nos
Rice distributed – 500 kg
Cleaning materials – 100 packets (each packet contained brush, detergent, disinfectant)

Drinking water – 600 bottles

The management and staff participated in cleaning drives at Alleppey, Munnar and Kuttanad.

Contributed bed sheets and dress materials to relief camps located in the area.

Marari beach provided monetary help to staff members whose houses were damaged by the flood.

The staff of Marari Beach made voluntary contributions of one day of their salary to the chief ministers’ relief fund.
The CGH Cell
Creating Foot Soldiers to Take Our Values Forward

Being one of the pioneer groups to stress on environment friendly practices in all operations, CGH Earth calls on all its employees to necessarily imbibe the core values that will ultimately reach their own homes and communities. With this in mind, a core group called The CGH Cell has been created, that focusses on indoctrinating the staff with the CGH core values. Being a non-hierarchical group, the entire team of Marari, irrespective of their role or grade come together to ideate on making Marari Beach a clean, green and healthy destination.

The staff members are divided into groups. The groups elect leaders to facilitate knowledge sharing, interactive sessions and even competitions. These activities open up possibilities for staff members to express their views, improve their personality and enhance their knowledge on various aspects of hospitality along with learning green environment policies and procedures.

Some of the outcomes of the CGH Cell include:
- Preventing use of plastics in whatever work they are involved in.
- Maintaining the property. We follow the policy ‘Clean as you go’.
- Constantly checking on the unnecessary usage / wastage of energy.
- Visits to local schools to speak to the students and educate them on environmental awareness.
- Organizing programs at multiple venues to create awareness and educate the local community about the various methods of recycling and reusing of waste material.

Other Programs
- Village walks: Every day at precisely 4.00pm the resort conducts a guided walk to the village which enables the guest to get a closer look and understand the culture, tradition, flora and fauna of the village.
- Eco Tours: The resort encourages guests, staff, students from schools, colleges and research scholars and people doing projects related to eco tourism to understand the involvement and initiative of the resort in nature conservation. The success of these initiatives has caught the attention of several entrepreneurs.
- Green Task Force: A body involved in educating the members on the staff and the related work force about the need and the processes involved in conserving energy. “Energy saved is energy generated”. The energy audit is conducted on a daily basis and all lapses are rectified immediately.
- We have initiated a campaign walk back to nature in association with the diocese of Alappuzha. The Reverend Bishop has issued a circular on the need for preserving Mother Nature, exhorting the community to ‘Walk back to the Grace and Gifts of Nature’.
- Cooking Classes: Every day, the resort conducts cooking classes for the guests to learn our way of cooking along with using our numerous spices.
- Eco Clubs: Visits of eminent professors, ecologists and environmentalists help in exchange of information and provision of sponsorships in Eco Clubs. Our close association with the activities of Eco Clubs round the Globe enables us to update ourselves with the latest trends and practices.
CUISINE OF MARARI BEACH

“PURE” is our definition of food and mindful eating is the experience that we offer. By this, we mean delicious meals are prepared using ingredients that are fresh, seasonal, whole and local, “cooked holistic and presented gourmet”.
It also means that we avoid using any form of processed food, use less saturated fat, use fewer refined products and promote sustainable food. Some of the more obvious examples of our food conscience are that we use unbleached flour in our breads, and even the table salt we provide is anything but processed.

Culinary Experiences offered at Marari Beach

Chakara
‘Chakara’ (the restaurant) offers a choice of both ethnic and international cuisine for breakfast, lunch and dinner. The a’ la carte menu is available all day and on some days, certain meals are served as buffets. The menu is curated to offer you an experience of ‘Coastal Cuisine’ which is a compilation of dishes inspired not only from the local fishing village but also exploring the cuisine.
of other fishing communities across the coast of Kerala and the Konkan belt.
The name Chakara is derived from a peculiar occurrence in which a large number of small fish and prawns throng together during certain periods of the monsoon. A precise scientific explanation is that during monsoons, the water level of the backwaters rises which facilitates the movement of fine clay particles into the sea through the subterranean channels. The accumulation of such organic material in relatively calm regions of the sea during the monsoons attracts fish and other sea animals. The fish and other seafood are washed up on the shores of beaches and the local community celebrate these occasions of nature’s abundance. This rare phenomenon is observed only along the coastal waters of Kerala and South America, where it has proved to be a boon for the local fisher folk. The main restaurant at Marari Beach is aptly named after this phenomenon, which to the local fisherman is nothing less than a celebration.

Farm Kitchen
The Farm Kitchen is located in the middle of an organic farm where native vegetables and fruits are grown under the supervision of local farmers. Conceptualized on the theme of Farm to Fork, the experience includes a walk around the garden to harvest fresh vegetables, an introduction to the ingredients, dishes and recipes, cooking with the chef and dining. It is a unique and interactive dining activity where you also get to mingle with other like-minded people. You will need to book in advance to be a part of the experience. Our Farm Kitchen operates from October to April.

Beach Grill
Beach Grill caters to seafood lovers as a specialty grill restaurant that is open only for dinner and is located in the open air of the coconut grove to provide the perfect outdoor ambience. The menu here, features the fresh catch of the day, which we buy from the local community. Advance booking is required for dinner. It opens in the afternoon to offer a light menu comprising comfort food and snacks. The Beach Grill operates from October to April.

Tea Cart
A local Tea Cart run by a tea master from the village is open on the Chakara Lawns for an hour from 4.00pm on all days. Here’s where you can enjoy the sheer pleasure of watching the making of the ‘meter high tea’ along with a crispy snack or two.

Club House
The Club House is a restored 200 year old building that has been converted into a bar. An ideal place to socialise, enjoy an aperitif or an after dinner drink. Drinks and snacks are served both at the Beach Shack and Pool Side through the day. Enjoy your sundowner at the coconut grove watching the changing hues of the sky while the sun sets and nightfall descends.

A cooking demonstration is conducted every day to help our guests get better acquainted with the native cuisine. At the end of their stay, they can carry home their favourite recipes with the confidence of knowing what goes into each dish. Recipe books are also available for purchase at The Shop.
Yellow oleander Nerium indicum, Apocynaceae
Kanjiram Strychnos nux – vomica, Loganiaceae
Cannonball tree Couroupita guianensis, Lecythidaceae
Shoe flower Hibiscus rosa-sinensis, Malvaceae
Wild nutmeg Myristica beddomei, Myristicaceae
Itti Ficus cordata, Moraceae
Ponkorangi Salacia fruticosa, Hippocrateaceae
Goosberry Phyllanthus emblica, Phyllanthaceae
Kattadi Cauorina equisetifolia, Cauorinaceae
Malaveppu Melia dubia, Meliaceae
Upas tree Antiaris toxicaria, Moraceae
Fern palm Cycas cinctalis, Cycadaceae
Indian almond Terminalia catappa, Combretaceae
Lady of the Night Brunfelsia calycina, Solanaceae
Gulmohur Delonix regia, Fabaceae
Nutmeg tree Myristica fragrans, Myristicaceae
Jequirity bean Abrus precatorius, Fabaceae
Indian plum tree Syzygium calophyllum, Myrtaceae
Chines Chaste tree Vitex negundo, Lamiaceae
Myxoprum Myxopyrum serratulum, Oleaceae
Thorny bamboo Bambusa arundianee, Poaceae
Umbrella palm (Talipot palm) Corypha umbraculifera, Arecaceae
Lolikkaa Placourtia inermis, Salicaceae
Surinam cherry Eugenia uniflora, Myrtaceae
Divdivi Caesalpinia coriaria, Caesalpiniaceae
Sappan wood Pathimukham Caesalpinia sappan, Caesalpiniaceae
Fig tree Ficus lyrata, Moraceae
Black eyed susan Thunbergia alata, Acanthaceae
Budhas Belly Bamboo Bambusa ventricosa, Poaceae
Attunochi, yelmonochi Vitex leucoxylon, Lamiaceae
Kattamulla Jasminum sambac, Oleaceae
Variegated Bauhania Bauhania variegata, Fabaceae
Custard apple Annona squamosa, Annonaceae
Lebeck tree Albizia lebbeck, Fabaceae
Javan Cassia Cassia javanca, Fabaceae
Coper pod treePeltophorum roxburghii, Fabaceae
Vanayotsana Jasminum rotundifolium, Oleaceae
Queen crape Lagerstroemia speciosa, Lythraceae
Dog bane Cerebra odorillum, Apocynaceae
Indian Tamarind Valanpuli, Tamarindus indica, Fabaceae
Bushy prince Ficus benjamina, Moraceae
Kampakam Hopea parviflora, Dipterocarpaceae
Kadukkappuli naranga Citrus Maxima, Rutaceae
Japen Fruits Eriobotrya japonica, Rosaceae
Indian rose wood Dalberiga latifolia, Fabaceae
Firebush Hamelia patens, Rubiaceae
Lemon Citrus limon, Rutaceae
Malabar lemon grass Cymbopogon flexuosus, Poaceae
Vetiver Vetiveria zizanioides, Poaceae
Kuzhinirayan chembu Colocasia esculenta, Araceae
Brown pine Podocarpus neriifolius, Podocarpaceae
Butterfly wine Stigmaphyllon littorale, Malpighiaceae
Alexandrian laurel Calophyllum inophyllum, Calophyllaceae
Togari wood of Madras Morinda angustifolia, Rubiaceae
Benyan tree Ficus religiosa, Moraceae
Yellow oleander Thevetia neriifolia, Apocynaceae
Dragon tree Dracaena fragrans, Asparagaceae
Pagoda plant Clerodendron paniculatum, Verbenaceae
Coral vine Antigonon leptopus, Polygonaceae
Athi Ficus lyrata, Moraceae
Adar Calotropis gigantea, Apocynaceae
Samadera Samadera indica, Simaroubaceae
Balnk tree Tabebuia pentaphylla, Bignoniaceae
Belliric myrobalan, Thanni Terminalia bellirica, Combretaceae
Karinkurinji Strobilanthes ciliata, Acanthaceae
Crataeva Neermathalam Crataeva magna, Capparaceae
Trumpet creeper Vellullipoo Bignonia grandiflora, Bignoniaceae
Thorn apple Neelayummam Datura stramonium, Solanaceae
Easter tree, Kudakappala Holarrhena antidysentrica, Apocynaceae
Illipa Madhuca neriifolia, Sapotaceae
Asaka Adaodakam Justica adhodota, Acanthaceae
White frangipani Plumeria alba, Apocynaceae
Arjun tree Terminalia arjuna, Combretaceae
Assam rubber Ficus elastica, Moraceae
Tree of Heaven Ailanthus excelsa,

Simaroubaceae
Bullet wood tree Mimusops elenji, Sapotaceae
Guava Psidium guajava, Myrtaceae
Bhadra ksham Guazuma ulmifolia, Malvaceae
Java apple Syzygium samarangense, Myrtaceae
Crepe myrtle flower Lagerstroemia indica, Lythraceae
Utrassam Bead tree Eleocarpus oblongus, Eleoarpaceae
Garuga Garuga pinnata, Burseraceae
Rain Tree Samanea saman, Fabaceae
Indian persimmon Diospyros peregrina, Ebenaceae
Wild Fig. Athi, Ficus racemosa Moraceae
**MEDICINAL PLANTS**


[Ummam] **Datura, Datura innoxia**, Solanaceae Use: - Dandruff, Asthma, Cough, Narcotic

[Arayal] **Peepal Tree**, Ficus religiosa, Moraceae Use: - Gastrointestinal, Anti-Bacterial, Diarrhoea

[Incha] **Soap Bark Tree**, Acasia pentia, Mimosaceae Use: - Skin Diseases, Wounds and Ulcers

[Manjayarali] **Yellow oleander**, Thevetia peruviana, Apocynaceae Use: - Diuretic, Leprosy


[Nellikall] **Gooseberry**, Phyllanthus emblica, Phyllanthaceae Use: - Ophthalmic, Anaemia

[Idampiri – valampiri] **Screw tree**, Helicteres isora, Sterculiaceae Use: - Diarrhoea, Dysentery

[Sankupusham] **Butterfly pea**, Clitoria ternatea, Fabaceae Use: - Asthma, Leucodermia

[Chittaratha] **Lesser galangal**, Alpinia officinarum, Zingiberaceae Use: - Expectorant, Bronchitis


[Thippalli] **Long pepper**, Piper longum, Piperaceae Use: - gastropathy, Laxative

[Amruthu] **Moon Plant**, Tinospora cordifolia, Menispermacées Use: - Anti-Pyretic, Aphrodisiac

[Erikk] **Gigantic Swallow Wort**, Calotropis gigantea, Apocynaceae Use: - Inflammation, Laxative

[Marotti] **Jungle Badham**, Hydnocarpus pentandra, Achariaceae Use: - Skin Diseases, Chronic Ulcer

[Insulin Chedi] **Costus pictus**, Costaceae Use: - Anti-Obstructive, Diuretic, Anti-Nephritic

[Thanlli] **Belliric myrobalan**, Terminalia bellirica, Combretaceae Use: - Anti-Inflammatory, Ophthalmic

[Chemparuthy] **Shoe flower**, Hibiscus rosa-sinensis, malvaceae Use: - Skin Disease, Fever

[Kaathoori Manjal] **Turmeric**, Curcuma aromatic, Zingiberaceae Use: - Bronchitis

[Maranjanal] **Indian Berberry**, Coscinium fenestratum, Menispermacées Use: - Ophthalmic, Anti-Inflammatory

[Vathakkodi] **Naravelia**, Naravelia zeylanica, Ranunculaceae Use: - Anti-Inflammatory

[Pillarilla] **Indian Sorrel**, Oxalis corniculata, Oxalidaceae Use: - Dysentery, Dyspepsia

[Vellanochi] **Five Leaved Chaste Tree**, Vitex leucoclydon, Lamiaceae Use: - Rheumatic disorders, Bronchitis

[Kattumulla] **Sambac jasmine**, Jasminum sambac, Oleaceae Use: - Wounds and Ulcers

[Pathimukham] **Sppan wood Tree**, Caesalpinia sappan, Caesalpiniaceae Use: - Diuretic, Blood Purifier

[Incha Pulu] **Malabar lemon grass**, Cymbopogon flexuosus, Poaceae Use: - gastro irritation

[Ramacham] ** Vetiver**, Chrysopogon zizanioides, Poaceae

[Chethi] **Ixora**, Ixora coccinea Rubiaceae Use: - Chronic Ulcer

[Konnapamala] **Crape jasmine**, Tabernaemontana dichotoma, Apocynaceae Use: - Leprosy, Skin diseases

[Menrbonn] **Flame lily**, Gloriosa superb, Colchicaceae Use: - Skin diseases, Leprosy

[Aruyaveppu] **Neem Tree**, Azadirachta indica, Meliaceae Use: - Eczema, Dermatology

[Munj] **Headache tree**, Premna serratifolia, Lamiaceae Use: - Anti-Inflammatory, Laxative

[Neemrathu] **Arjun tree**, Terminalia arjuna, Combretaceae Use: - Anti – Diabetic, Diuretic, Cardiac problems

[Thumba] **Leucas**, Leucas aspera, Lamiaceae Use: - Cough, Cold, Fever

[Ramacham] **Vetiver**, Chrysopogon zizanioides, Poaceae Use: - Jaundice, fever

[Kadukka] **Chebulic myrobalan**, Terminalia chebula, Combretaceae Use: - Gastric, Flatulence

[karuva] **Cinnamon**, Cinnamomum verum lauraceae Use: - Indigestion, abdominal pain

[Murikottu] **Blume**, Hemigraphis colorata, Acanthaceae Use: - Wound, Ulcers, Bleeding

[Pol]: **Devil’s tree**, Alstonia scholaris, Apocynaceae Use: - Eczema, Leprosy

[Kallai] **Stone fig**, Ficus gibbosa, Moraceae Use: - Dysentery, Anti – Bacterial, Diarrhoea

[Athil] **Wild fig**, Ficus racemosa, Moraceae Use: - Dysentery, Anti – Diabetic

[Koovalam] **Bael**, Aegle marmelos, Rutaceae Use: - Diarrhoea, Dysentery

[Pongalayam] **Tree of Heaven**, Allantáshus excelsa, Simaroubaceae

[Chathurapulli] **Carambola**, Averrhoa carambola, Oxalidaceae Use: - Vomiting, Diarrhoea, Dysentery

[Ambazham] **Indian Hog plum**, Spondias indica, Anacardiaceae Use: - Dyspepsia, Diarrhoea, Dysentery

[Chakkarakolli] **Sugar Killer**, Gymnema sylvestre, Apocynaceae Use: - Inflammations, Liver tonic, Diuretics, Cardiopathy

[kattarvazha] **Aloe vera**, Aloe barbadensis, Asphodelaceae Use: - Skin Disease, Dyspepsia, Burma


[Avanakku] **Gaster**, Ricinus communis, Euphorbiaceae Use: - Inflammatory, Leprocy, Skin Diseases, Purgative

[66]

[67]
[Chittamritu] Tinospora, Tinospora cordifolia, Menispermaceae
Use: Rheumatic fever, Rejuvenating

[Nella Erukk] Blue Madar, Calotropis gigantea, Apocynaceae
Use: Inflammation, Laxative

[Asokam] Asoka sarac, Saraca asoca Fabaceae
Use: Amenorrhea, Bleeding

[Arayal] Peepal tree, Ficus religiosa, Moraceae

[Ayyappana] Ayapana tea, Eupatorium triplinervis, Asteraceae
Use: Digestive, Anti-Pyretic

[Gaudapacha] Resurrection plant, Selaginella rupestris, Selaginellinae

[Athipazham] Fig, Ficus carica, Moraceae
Use: Dysentery, Diarrhoea

[Vankuruntotti] Wild mallow, Malva sylvestris, Malvaceae
Use: Fever, Malarial fever, vatha violation

[Naikaruna] Cowhage, Mucuna pruriens, Fabaceae
Use: Constipation, Diuretic, Nephropathy

[Cherula] Aerva lanata, Amaranthaceae
Use: Diuretic, Prostrate enlargement

[Brahmi] Brahmi, Bacopa monnieri, Plantaginaceae
Use: Dyspesia, Epilepsy, Memory booster

[Kayoni] Trailing eclipeta, Eclipta prostrata, Asteraceae
Use: Good for blackening and strengthening hair, Ophthalmology

[Elani] Billet- wood tree, Minusops elengi, Sapotaceae
Use: Diarrhoea, Anti- elementi, Cystorrhoea

[Kurumottotti] Common sida, Sida rhombifolia, Malvaceae
Use: Rheumatism, Promt sexual vigours, Arthritus

[Ramatulasi] Sweet basil, Ocimum basilicum, Lamiaceae
Use: Anti-inflammotary, Anti- spasmodic, cardiac tonic

[Danathapala] Ivory tree, Wrightia tinctoria, Apocynaceae
Use: Diarrhoea, Leprosy, Psoriasis

[Karimaram] Pyinkado, Xyilia xylocarpa, Fabaceae

[Bhadruksham] Elaeocarpus tuberculatus, Elaeocarpaceae
Use: Epileptic fits, maniac conditions, Conversions, Insomnia

[Njavall] Black plum, Syzygium cumini, Myrtaceae
Use: Anti-Diabetic, Diuretic

[Teak Tree] Teak tree, Tectona grandis, Verbenaceae
Use: Diabetic, Leprosy, Skin diseases

[Nannaari] Indian sarsaparilla, Hemidesmus indicus, Asclepiadaceae
Use: Skin diseases, cooling the skin, pain killer

[Kudangal] Indian pennywort, Hydrocotyle asiatica, Apiaceae
Use: Cardiac tonic, Insomnia, Asthma

[Sarpagandhi] Indian Snakerooot, Rauvolfia serpentina, Apocynaceae
Use: Hypertension

[Vallippala] Emetic Swallow Wort, Tylorrhora indica, Apocynaceae
Use: Asthma, Cough, bronchitis

[Karincori] Five - leaved Chaste tree, Vitex negundo, Lamiaceae
Use: Anti-Pyretic, Diuretic

[Mavu] Mango tree, Mangifera indica, Anacardiaceae
Use: Diarrhoea,

[Koduvelli] Leadwort, Plumbago auriculata, Plumbaginaceae
Use: Piles, Fistula, Anaemia
Cormorants
1. Little Cormorant (Microcarbo niger)

Heron, Egrets & Bitterns
2. Purple Heron (Ardea purpurea)
3. Indian Pond Heron (Ardeola grayii)
4. Black-crowned Night Heron (Nycticorax nycticorax)
5. Cattle Egret (Bubulcus ibis)
6. Little Egret (Egretta garzetta)
7. Cinnamon Bittern (Ixobrychus cinnamomeus)
8. Yellow Bittern (Ixobrychus sinensis)
9. Black Bittern (Dupetor flavicollis)

Storks
10. Asian Openbill ( Anastomus oscitans)

Ducks
11. Lesser Whistling Duck (Dendrocygna javanica)
12. Cotton Pygmy Goose (Nettapus coromandelianus)

Hawks
13. Oriental Honey Buzzard (Pernis ptilorhynchus ruficollis)
14. Black Kite (Milvus migrans)
15. Brahminy Kite (Haliastur Indus)

16. Shikra (Accipiter badius)

Rails
17. White-breasted Waterhen (Amaurornis phoenicurus)

Plovers
18. Whimbrel (Numenius phaeopus)
19. Common Redshank (Tringa totanus)
20. Nordmann's Greenshank (Tringa nebularia)
21. Wood Sandpiper (Tringa glareola)
22. Common Sandpiper ( Actitis hypoleucos)
23. Little Stint ( Calidris minutula)

Gulls, Terns
24. Brown-headed Gull (Larus brunnicephalus)
25. Whiskered Tern (Chlidonias hybridus)

Parrots
26. Rose-ringed Parakeet (Psittacula krameri)

Cuckoos
27. Common Hawk-creeper (Hierococcyx varius)
28. Drongo-Cuckoo (Surniculus dicrurus)
28. Asian Koel (Eudynamys scolopaceus)
30. Southern Coucal (Centropus sinensis parvulus)

Owls
31. Barn Owl (Tyto alba stertens)
32. Indian Scops Owl ( Otus bakkamoena)
33. Brown Hawk Owl ( Ninox scutulata)
34. Jungle Owlet (Glaucidium radiatum)
35. Spotted Owlet ( Athene brama)
36. Mottled Wood Owl (Strix occidentalis)

Swifts
37. Alpine Swift ( Tachymarptis melba)
38. House Swift ( Apus nipalensis)
39. Asian Palm Swift ( Cypsiurus balasiensis)

Kingfishers
40. Common Kingfisher ( Alcedo atthis)
41. Stork-billed Kingfisher ( Pelargopsis capensis)
42. White-throated Kingfisher ( Halcyon smyrnensis fusca)
43. Black-capped Kingfisher ( Halcyon pileata)

Beeeaters
44. Blue-tailed Bee-eater ( Merops philippinus)
45. Green Bee-eater ( Merops orientalis)

Rollers
46. Indian Roller ( Coracias benghalensis)

Hoopoes
47. Common Hoopoe ( Upupa epops)

Barbets
48. White-cheeked Barbet ( Psilopogon viridis)

Woodpeckers
49. Rufous Woodpecker ( Micropterus brachyurus)
50. Black-rumped flameback Woodpecker ( Dinopium benghalense)
51. Brown-capped Pygmy Woodpecker ( Yungipicus nanus)

Pittas
52. Indian Pitta ( Pitta brachyura)

Swallows
53. Barn Swallow ( Hirundo rustica)
54. Red-rumped Swallow ( Cecropis daurica)

Shrikes
55. Brown Shrike ( Lanius cristatus cristatus)

Orioles
56. Eurasian Golden Oriole ( Oriolus oriolus)
57. Black-naped Oriole ( Oriolus chinensis)
58. Black-hooded Oriole ( Oriolus xanthornus)
LIST OF BUTTERFLIES AT MARARI

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sothern Birdwing</td>
<td>Troides minos</td>
</tr>
<tr>
<td>2</td>
<td>Common Rose</td>
<td>Pachliopta aristolochiae</td>
</tr>
<tr>
<td>3</td>
<td>Crimson Rose</td>
<td>Pachliopta hector</td>
</tr>
<tr>
<td>4</td>
<td>Common Blue Bottle</td>
<td>Graphium sarpedon</td>
</tr>
<tr>
<td>5</td>
<td>Common Jay</td>
<td>Graphium doson</td>
</tr>
<tr>
<td>6</td>
<td>Tailed Jay</td>
<td>Graphium agamemnon</td>
</tr>
<tr>
<td>7</td>
<td>Common mime</td>
<td>Papilio clytia</td>
</tr>
<tr>
<td>8</td>
<td>Lime Butterfly</td>
<td>Papilio demoleus</td>
</tr>
<tr>
<td>9</td>
<td>Common Mormon</td>
<td>Papilio polytes</td>
</tr>
<tr>
<td>10</td>
<td>Blue Mormon</td>
<td>Papilio polymnestor</td>
</tr>
<tr>
<td>11</td>
<td>Malabar Raven</td>
<td>Papilio dravidarum</td>
</tr>
<tr>
<td>12</td>
<td>Lemon/Common Emigrant</td>
<td>Catopsilia pomona</td>
</tr>
<tr>
<td>13</td>
<td>Mottled Emigrant</td>
<td>Catopsilia pyranthe</td>
</tr>
<tr>
<td>14</td>
<td>Common Grass yellow</td>
<td>Eurema hecabe</td>
</tr>
<tr>
<td>15</td>
<td>Common Jezebel</td>
<td>Delias eucharis</td>
</tr>
<tr>
<td>16</td>
<td>Psyche</td>
<td>Leptosia nina</td>
</tr>
<tr>
<td>17</td>
<td>Chocolate Albatross</td>
<td>Appias lyncida</td>
</tr>
<tr>
<td>18</td>
<td>Common Albatross</td>
<td>Appias abina</td>
</tr>
<tr>
<td>19</td>
<td>Plain Orange Tip</td>
<td>Colotis aurora</td>
</tr>
<tr>
<td>20</td>
<td>Great/Giant Orange Tip</td>
<td>Hebomoia glaucippe</td>
</tr>
</tbody>
</table>

Droncos
59. Black Dronco (Dicrurus macrocercus)  
60. Greater Racket-tailed Dronco (Dicrurus paradiseus)

Swallow-Shrikes
61. Ashy Wood Swallow (Artamus fuscus)

Starling & Mynas
62. Common Myna (Acridotheres tristis)  
Crow. Tree Pies
63. Rufous Tree Pie (Dendrocitta vagabunda)  
64. House Crow (Corvus splendens)  
65. Large-Billed Crow (Corvus macrorhynchos)

Lora. Leaf-Birds
66. Common lora (Aegithina tipha)  
67. Gold-Fronted leafbird (Chloropsis aurifrons)

Bulbuls
68. Red-Whiskered Bulbul (Pyconotus jocosus)  
69. Red-Vented Bulbul (Pyconotus cafer)

Babblers, Thrushes
70. Jungle Babbler (Turdoides striata)  
71. White-Throated Ground Thrush (Zoothera citrina cyanotus)

Flycatchers
72. Asian Brown Flycatcher (Musciapia latirostris)  
73. Brown-Breasted Flycatcher (Musciapa muttui)

Fantail Flycatchers
74. Asian paradise Flycatchers (terpsiphone paradisi)

Warblers
75. Common Tailor Bird (Orthotomus sutorius)  
76. Blyth’s Reed Warbler (Acrocephalus dumetorum)  
77. Greenish Leaf Warbler (Phylloscopus trochiloides)  
78. Forest Wagtail (Dendronanthus indicus)

Flowerpeckers
79. Pale-Billed Flowerpecker (Dicaeum erythrorhynchus)

Sunbirds
80. Purple Rumped Sunbird (Leptocoma zeylonica)  
81. Loten’s Sunbird (Cinnyris lotenius)  
82. Purple Sunbird (Cinnyris asiaticus)

Munias
83. White-Rumped Munia (Lonchura striata)  
84. Black-Throated Munia (Lonchura kelaarti)  
85. Scaly-Breasted Munia (Lonchura punctulata)

Sandgrouse
86. Rock Pigeon (Columba livia)  
87. Eurasian Collared Dove (Streptopelia decaocto)  
88. Spotted Dove (Spilopelia chinensis)
| 21 | Common Evening Brown          | Elymnias hypermnestra                  |
| 22 | Common Palmfly                | Lethe europa                            |
| 23 | Bamboo Tree Brown             | Mycalesis perseus                       |
| 24 | Common Bush Brown             | Orsotriaena medus                       |
| 25 | Nigger                        | Ypthima huebneri                        |
| 26 | Common Four – Ring            | Ypthima baldus                          |
| 27 | Common Five – Ring            | Polyyra athamas                         |
| 28 | Common Nawab                  | Charaxes solon                          |
| 29 | Black Rajah                   | Acraea terpsicore                       |
| 30 | Tawny Coster                  | Cupha erymantis                         |
| 31 | Southern Rustic               | Phalanta phalantha                      |
| 32 | Common Leopard                | Phalanta alcippe                        |
| 33 | Small Leopard                 | Cirrochroa thais                        |
| 34 | Tamil Yeoman                  | Nepthis hylas                           |
| 35 | Common Sailer                 | Moduzza procris                         |
| 36 | Commander                     | Parthenos sylvia                        |
| 37 | Clipper                       | Tanaecia lepidea                        |
| 38 | Grey Count                    | Euthalia acontea                        |
| 39 | Common baron                  | Pachliopta pandiyana                    |
| 40 | Malabar Rose                  | Euthalia lubentina                      |
| 41 | Gaudy Baron                   | Parthenos sylvia                        |
| 42 | Clipper                       | Zizina otis                             |
| 43 | Dark Grass Blue               | Zizeeria karsandra                      |
| 44 | Asian Zebra Blue              | Leptotes plinius plinius                |
| 45 | Indian Common Silver Line     | Spindasis vulcanus                      |
| 46 | Monkey Puzzle                 | Rathinda amor                           |
| 47 | Blue Tiger                    | Tirumala limniace                       |
| 48 | Glassy Tiger                  | Parantica aglea                         |
| 49 | Common Indian Crow            | Euploea core                            |
| 50 | Striped Tiger                 | Danaus genutia                          |
| 51 | Plain Tiger                   | Danaus chryssippus                      |
| 52 | Plain Cupid                   | Luthrodes pandava                       |
| 53 | Common Cerulean               | Jamides celeno                          |
| 54 | Water Snow Flat               | Tagiades litigiosa                      |
| 55 | Common Snow Flat              | Tagiades japatetus                      |
| 56 | Suffused Snow Flat            | Tagiades gana                           |
| 57 | Chocolate Pansy               | Junonia iphita                          |
| 58 | Grey Pansy                    | Junonia atlites                         |
| 59 | Peacock Pansy                 | Junonia almana                          |
| 60 | Common Palmfly                | Elymnias hypermnestra                   |
| 61 | Rice Swift                    | Borbo cinnara                           |
| 62 | Painted Lady                  | Vanessa cardui                          |
| 63 | Red Pierrot                   | Talcada nyseus                          |
| 64 | Indian Oakblue                | Arhopala atrax                          |
| 65 | Grass Jewel                   | Freyeria trochylus                      |
| 66 | Lemon Pansy                   | Junonia lemonias                        |
| 67 | Dark Blue Tiger               | Tirumala septentrionis                  |
| 68 | Dark Evening Brown            | Melanitis phedima                       |
| 69 | Indian Sunbeam                | Curetis thetis                          |
| 70 | Peacock Royal                 | Tajuria cippus                          |
| 71 | Chestnut Streaked Sailor      | Neptis jumbah                           |
| 72 | Great Eggfly                  | Hylominnas bolina                       |
| 73 | Danaid Eggfly                 | Hylominnas misippus                     |
| 74 | Yamfly                        | Loxura atynmus                          |
| 75 | Fritillary                    | Agraulis vanillae                       |
| 76 | Grass Demon                   | Udaspes folus                           |
| 77 | Giant Redeye                  | Gangara thysis                          |
| 78 | Common Redeye                 | Matapa aria                             |
| 79 | Chestnut Bob                  | Iambrix salsala                         |
| 80 | Tricolour r Pied Flat          | Goladenia indrani                       |
| 81 | Common Pierrot                | Castalius rosimon                       |
RESULTS ACHIEVED

We are extremely gratified to see the extent to which the socio-economic development of the fishing village has improved since the inception of our project. We were able to bring global tourist attention to Mararikulam village and to give it a face-lift as a much sought after tourist destination. And we have succeeded well beyond our own expectations. The model of Marari has been adopted by other hotels in the vicinity and several fishermen have also joined the tourism industry by converting their houses into homestays that attract tourists in large numbers.

Reducing plastic at Marari Beach
Data quantified as per financial year 2018-19
• Milk is purchased from the PDDP factory in Angamali and procured in stainless steel containers instead of plastic packets of 500 ml packs as is available in the local market. Total quantity purchased is 24,206 litres and so Marari Beach ends up avoiding 48,412 packets of waste plastic milk packets.
• Drinking water in glass bottles of 1 liter. Total house count in a year – 28,176. Each guest consumes approximately 3 litres a day which translates to 84,528 litres for house guests alone. An additional 25,000 litres will be consumed by our walk in guests and during other events. So with a total consumption of 1,09,528 litres of drinking water which we disburse in glass bottles, we end up avoiding the use and throw of that many plastic bottles.
• Branded natural mineral water in glass bottles – 1,328 no.s (purchased by guests)
• We switched to cans of soda and soft drink to reduce plastic bottles. Cans of Soft drinks / soda consumed in a year account for 11,205 units as against plastic bottles.
• We switched from plastic foil packaging to tins to offer nuts in the minibar. The total consumption of tinned nuts last year was 3,675 tins.
• We arranged for special packaging for the chocolates placed in the room minibars to avoid plastic. Total consumption of chocolate in a year was 500 packets.
• Juice cans (to avoid tetra packed juice) for packed breakfasts totaled 1,960 cans.
• We placed fresh ground coffee in the rooms to avoid sachets, thereby reducing to nil the entire quantity of 16,200 coffee sachets purchased in previous years.
• Provisions purchased from vendors are carried in reusable containers that we provide thereby preventing the generation of more plastic waste. This action was necessitated because almost all provisions available in the market are unfortunately packed in plastic packs.

Some of the items purchased along with their quantities are tabled below

<table>
<thead>
<tr>
<th>Item</th>
<th>Kgs</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACE</td>
<td>1.85</td>
<td></td>
</tr>
<tr>
<td>RATAN JAG</td>
<td>2.25</td>
<td></td>
</tr>
<tr>
<td>BAY LEAVES</td>
<td>2.55</td>
<td></td>
</tr>
<tr>
<td>SESAME SEED-WHITE 5%</td>
<td>3.75</td>
<td></td>
</tr>
<tr>
<td>CLOVES</td>
<td>3.75</td>
<td></td>
</tr>
<tr>
<td>SESAME SEED-BLACK 5%</td>
<td>4.00</td>
<td></td>
</tr>
<tr>
<td>SEVA</td>
<td>4.00</td>
<td></td>
</tr>
<tr>
<td>AASHALI</td>
<td>5.00</td>
<td></td>
</tr>
<tr>
<td>THEN-ORGANI</td>
<td>6.00</td>
<td></td>
</tr>
<tr>
<td>CASHEW NUT FULL-ROASTED</td>
<td>7.50</td>
<td></td>
</tr>
<tr>
<td>STAR ANISE</td>
<td>7.50</td>
<td></td>
</tr>
<tr>
<td>DAL-MASOOR</td>
<td>8.00</td>
<td></td>
</tr>
<tr>
<td>WHEAT FLOUR</td>
<td>8.00</td>
<td></td>
</tr>
<tr>
<td>RAJMA BEANS</td>
<td>10.00</td>
<td></td>
</tr>
<tr>
<td>LOKHIYA BEANS-WHITE 4%</td>
<td>13.00</td>
<td></td>
</tr>
<tr>
<td>FRUVMS</td>
<td>14.50</td>
<td></td>
</tr>
<tr>
<td>GINGER-DRY</td>
<td>17.00</td>
<td></td>
</tr>
<tr>
<td>DAL-BLACK-WHOLE</td>
<td>20.00</td>
<td></td>
</tr>
<tr>
<td>FENUGREEK</td>
<td>21.00</td>
<td></td>
</tr>
<tr>
<td>ROSE-NAVARA</td>
<td>22.00</td>
<td></td>
</tr>
<tr>
<td>CINNAMON</td>
<td>22.70</td>
<td></td>
</tr>
<tr>
<td>BARLEY</td>
<td>23.00</td>
<td></td>
</tr>
<tr>
<td>CORIANDER SEEDS</td>
<td>27.00</td>
<td></td>
</tr>
<tr>
<td>CARDAMOM</td>
<td>34.50</td>
<td></td>
</tr>
<tr>
<td>SAUNF</td>
<td>67.00</td>
<td></td>
</tr>
<tr>
<td>BESAN FLOUR</td>
<td>80.00</td>
<td></td>
</tr>
<tr>
<td>COCONUT</td>
<td>80.00</td>
<td></td>
</tr>
<tr>
<td>GREEN PEAK-DRY 1%</td>
<td>83.00</td>
<td></td>
</tr>
<tr>
<td>POTTU KADALA</td>
<td>83.00</td>
<td></td>
</tr>
<tr>
<td>MUSTARD</td>
<td>90.50</td>
<td></td>
</tr>
<tr>
<td>CHILLY-DRY</td>
<td>92.00</td>
<td></td>
</tr>
<tr>
<td>VANAYAR</td>
<td>93.00</td>
<td></td>
</tr>
<tr>
<td>ALMOND</td>
<td>107.00</td>
<td></td>
</tr>
<tr>
<td>PEPPER CORN-BLACK</td>
<td>112.00</td>
<td></td>
</tr>
<tr>
<td>CHANNA-WHITE</td>
<td>218.00</td>
<td></td>
</tr>
<tr>
<td>MAIDA</td>
<td>234.00</td>
<td></td>
</tr>
<tr>
<td>CHANNA-BLACK</td>
<td>255.00</td>
<td></td>
</tr>
<tr>
<td>CHANNA DAL</td>
<td>265.00</td>
<td></td>
</tr>
<tr>
<td>DAL-MOONG</td>
<td>340.50</td>
<td></td>
</tr>
<tr>
<td>GREEN GRAM</td>
<td>391.00</td>
<td></td>
</tr>
<tr>
<td>RAVA</td>
<td>500.00</td>
<td></td>
</tr>
<tr>
<td>DAL-TUR</td>
<td>585.00</td>
<td></td>
</tr>
<tr>
<td>DAL-URAD</td>
<td>1,090.00</td>
<td></td>
</tr>
</tbody>
</table>
A total of 5052.85 kg of various food products was purchased for Marari Beach. These products are available in the market in 1 kg plastic packs. By purchasing these items in our own containers, we avoided the wasteful one time use of 5052 plastic packets:

- Newspaper carry bags – 3,500 nos
- Newspaper envelopes – 4,300 nos
- Laundry bags (cloth) – 1,361 nos
- Newspaper sanitary bags – 1,600
- Paper straws used last year – 36,250 nos
- As against plastic straws previously
- We use traditional Bharani’s or Jars to fill and keep toiletries for guest consumption.

Usually hotels buy branded and sealed toiletries packaged in standard size plastic containers of 50 ml. By that calculation, we have ended up avoiding the following quantities of plastic bottles:

- Used – Shampoo (140 litres) – 4,665 bottles
- Used – Conditioner (60 litres) – 2,000 bottles
- Used – Moisturiser (55 litres) – 1,832 bottles
- Used – Shower gel (350 litres) – 4,332 bottles
- We use a local product called Inja which is a natural substitute to the Loofa.

Quantity of Inja purchased – 3,105 nos

- Seed pen / pencil – 1,700 nos
- Jute slippers – 2,125 nos
- Coir mats – 350 nos in use
- Brooms made of natural material – 240 nos
- Bamboo Fruit picks / skwers / stirrer – 19,700 nos

- A paint emulsion which contains plastic if used in a place like Marari, would entail usage of a quantity of at least 52,00 litres for two coats of paint. Unlike other resorts, we use white wash or lime wash for the walls in the resort, thereby totally avoiding the use of paint.
- The roof of all buildings in the resort is done with coconut leaf thatch. The amount of thatching leaf purchase – 70,000 pairs

Other Measures to reduce plastic consumption

- We use cane which is a fast growing tree to make furniture in rooms and public area
- Outdoor furniture is made of wroght iron or wooden as opposed to plastic
- All Photo frames used here are wooden
- All Tennis / Badminton court floor is clay and not synthetic
- The Amphitheatre is landscaped for people to sit so that outdoor chairs are not required.
- Name tags are made of metal instead of plastic
- Curtains are made of cloth or bamboo
- Hats for outdoor workers / gardeners are made of palm leaves
- Plates made of banana leaf are used at the tea cart and farm kitchen
- All our sign boards are wooden
- Diesel storage barrels are made of metal and not plastic
- Staff uniforms are made of pure cotton and do not have a mix of polyester
- The water tanks are made of Ferro cement
- All Lamp shades are made of fabric
- Dust bins in rooms and public spaces are not made of plastic.
- Organic pesticides and fertilizer for garden are made in house using natural materials which otherwise would have to be purchased from the market only available in plastic packets.
- Used thatch is made into compost to be used as fertilizer in the organic garden. A coconut crusher is installed on the property to crush used tender coconut that are offered as welcome drinks. This is then made into compost. It helps us to be self-sufficient and there is no need to purchase any fertilizer or manure from the market which will come packaged in plastic.
- All ponds in the property are natural where fish are bred as opposed to other places, where a plastic sheet is used to collect and retain water in ponds.
- Christmas decorations are made only from recycled natural materials available on the property.
- E waste (television) is minimized. We do not have televisions in any of the rooms.

Quantified Financial Benefits towards the Community

Local Purchases
- Tender coconut – Rs.6,10,000.00
- Local fish and shellfish purchase – Rs.55,00,000.00
- Local vegetables purchase – Rs.33,00,000.00
- Flower purchase – Rs.2,50,000.00
- Other local purchases – Rs.48,00,000.00

Total local purchases – Rs.1,25,00,000.00

Other benefits
- Around 7 houses from the village have been leased to accommodate staff. The resort pays a rent of Rs.6,12,000.00 per annum.
- Around 8 Taxis & 6 Tuk Tuks from the neighborhood are available for hired use by guests. We promote various activities for which these vehicles are used thereby benefiting the community. The list of activities we offer include:
  - Fish Landing • Sunset Cruise • Temple Trail • Country Boat Ride • Enchanting Gochin • Discover Alleppey • Houseboat Day & Overnight Cruise • Backwater Cruise

Creating Jobs for the community

Construction of Marari Beach

Total man days involved in labor force both skilled and unskilled – 1,27,000 (over a period of 2 years 1997-1998)

For the Year 2018

Payroll Total man days for Hotel Operations – 36,865
- Front office – 5,650
- Housekeeping – 8,050
- Kitchen – 9,490
- Restaurants – 7,300
- Engineering – 4,745
- Administration – 3,650
- Support and utility staff man days – 28,723
- Garden maintenance – 3,650
- Organic farming – 1,825
- Security – 6,570
- Utility – 6,570
- Laundry – 1,460
- Entertainment – 200
- Ayurveda – 7,500
- Shop – 1,095
- Yoga – 92
- Pest control – 730
- Miscellaneous (Naturalist, tea cart, cleaning, tennis court) – 251
- Indirect employment man days – 6,000
- Thatching – 820
- Casual labor – 1,270
- Civil workers – 1,155
- Carpentry – 640
- Painting and polishing – 1,465
- Coconut harvest – 195
- Plumbing – 285
- Electrical – 90
- Tile work – 100

Total man days in a year – 72,558
Average man days per day - 192
The below list shows details of purchases from Responsible tourism associated societies or registered vendors, locally and within the state for the financial year 2019-20

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of Supplier</th>
<th>Items Supplied</th>
<th>Qty</th>
<th>Amount (in Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Padmakumar C</td>
<td>Thatching Leaves, Palm String, Kattadi Stick</td>
<td>79,975 nos. 2,200 kg 485 nos.</td>
<td>13,52,085.00 82,400.00 1,41,740.00</td>
</tr>
<tr>
<td>2</td>
<td>Kavalan Agencies</td>
<td>Bamboo Mat, Coir, Kattadi Stick</td>
<td>15 nos. 300 kg 325 nos.</td>
<td>2,700.00 34,850.00 1,05,250.00</td>
</tr>
<tr>
<td>3</td>
<td>C.S. Xavier &amp; Sons(Joy)</td>
<td>Kattadi Stick, Thatching Leaves</td>
<td>50 nos. 6,420 nos.</td>
<td>17,250.00 1,34,350.00</td>
</tr>
<tr>
<td>4</td>
<td>Sree Hari Enterprises</td>
<td>Incha Bath Scrubber</td>
<td>3,105 nos.</td>
<td>46,220.00</td>
</tr>
<tr>
<td>5</td>
<td>Marari Marketing (Kudumbasree initiative)</td>
<td>Guest Umbrella</td>
<td>362 nos.</td>
<td>1,51,702.58</td>
</tr>
<tr>
<td>6</td>
<td>Terracraft</td>
<td>Terracotta Candle Stand, Terracotta Ashtray, Terracotta Wine Chiller</td>
<td>86 nos. 30 nos. 43 nos.</td>
<td>7,990.00 1,500.00 8,170.00</td>
</tr>
<tr>
<td>7</td>
<td>Sahoo P.A</td>
<td>Hammock Supplier</td>
<td>15 nos.</td>
<td>9,750.00</td>
</tr>
<tr>
<td>8</td>
<td>Sree Muruka Press</td>
<td>Newspaper carry Bag</td>
<td>3,500 nos.</td>
<td>31,500.00</td>
</tr>
<tr>
<td>9</td>
<td>T.A. Joseph</td>
<td>Cane Basket</td>
<td>88 nos.</td>
<td>43,175.00</td>
</tr>
<tr>
<td>10</td>
<td>The Calicut Tile Company</td>
<td>Terracotta pathway Tiles</td>
<td>3,500 nos.</td>
<td>82,688.00</td>
</tr>
<tr>
<td>11</td>
<td>Anugraha Pappadam</td>
<td>Pappadam</td>
<td>76,525 nos.</td>
<td>76,825.00</td>
</tr>
<tr>
<td>12</td>
<td>Arakkal Enterprises</td>
<td>Chilly Powder-Fresh Corriander Powder-Fresh K.chilly Powder-Fresh</td>
<td>165 kg 198 kg 88 kg</td>
<td>74,171.17</td>
</tr>
<tr>
<td>13</td>
<td>Thomas K.T</td>
<td>Coconut-Garden Fresh Fish</td>
<td>18,840 nos. 60 kg</td>
<td>2,87,684.45 4,060.00</td>
</tr>
<tr>
<td>14</td>
<td>Organic Garden - Marari</td>
<td>Assorted Vegetables</td>
<td></td>
<td>1,64,464.20</td>
</tr>
<tr>
<td>15</td>
<td>Baju T.P.</td>
<td>Shell Fish-Assorted</td>
<td></td>
<td>19,24,464.00</td>
</tr>
<tr>
<td>16</td>
<td>Beena Suniladas</td>
<td>Shell Fish-Assorted</td>
<td></td>
<td>27,68,55.00</td>
</tr>
<tr>
<td>17</td>
<td>K.A. Antony</td>
<td>Fresh Fish Assorted</td>
<td></td>
<td>10,85,082.10</td>
</tr>
<tr>
<td>18</td>
<td>M.S. Abdul Khader</td>
<td>Fresh Fish Assorted</td>
<td></td>
<td>25,79,88.50</td>
</tr>
<tr>
<td>19</td>
<td>H.I.'s Fish Stall</td>
<td>Fresh Fish-Assorted</td>
<td></td>
<td>2,66,195.50</td>
</tr>
<tr>
<td>20</td>
<td>Meat Bazar</td>
<td>Fresh Meat items</td>
<td></td>
<td>7,96,267.00</td>
</tr>
<tr>
<td>21</td>
<td>K.V. Vijayan</td>
<td>Fresh Tender coconut</td>
<td>1,660 nos.</td>
<td>5,29,506.00</td>
</tr>
<tr>
<td>22</td>
<td>PDDP Society</td>
<td>Fresh Milk</td>
<td>238.21 ltr</td>
<td>9,21,176.00</td>
</tr>
</tbody>
</table>

**TOTAL**

85,47,406.50

**Savings**

We have avoided air conditioning of the reception and restaurant, designing these areas in such a way that there is non-stop air flow. By using thatch for the roof, we have managed to bring down the internal ambient temperature considerably. If we were to install air-conditioning, the installed capacity would have to be a minimum of 50 tons using power that would cost us up to Rs.3,000.00 per day which would aggregate to Rs.10,95,000.00 per year. That entire amount has been saved.

Thatch on the roof of rooms helps reduce air conditioning consumption by 10%.

Due to the abundance of trees here, the ambient temperature is much cooler than other areas.

**Bio Gas Plant**

Our savings on cooking gas are worth over Rs.3,00,00,000.00 per annum.

Bio Mass Digester

Fertilizer worth Rs.50,00,000.00 per annum is saved.

Vermin Compost

Agro fertilizer worth Rs.1,20,00,000.00 per annum

**EM Composting**

We make compost worth Rs.60,00,000.00 per annum

**Sewage Treatment plant**

85,000 litres of water recycled from the waste water treatment plant is used for agriculture, garden watering and irrigation.

**Organic farming - Revenue generated**

Rs.40,00,000.00 per year

**From The Process of Energy Conservation**

Solar energy: 85 nos. of collectors save the consumption of diesel worth Rs.21,428 per month which translates to Rs.1,50,000.00 per year

**Rain water harvesting - Collection area of 30 acres receives 100 lakh litres per annum. Ensuring low salinity and improving the quality of the ground water.**

**Inventory management**

The principles of ‘Just in time’, ‘Fresh in Fresh out’ and “Catch of the Day” and local purchase helps us to keep our materials management, especially with regard to food supplies optimized, thereby reducing energy consumption and carbon footprint.
Awards Won by Marari Beach

- State Pollution Control Board Award
  3rd 2014-15

- State Tourism Award
  3 star 2014-15

- National Tourism Award
  3 star 2013-14

- State Pollution Control Board Award
  1st 2015-14

- State Tourism Award
  3 star 2015-14

- State Pollution Control Board Award
  2nd 2012-13

- State Tourism Award
  Best GM - 3 Star 2012-13

- State Tourism Award
  3 star 2011-12

- State Tourism Award
  3 star 2010-11

- State Tourism Award
  3 Star 2009-10

- State Tourism Award
  Best Innovative Project 2009-10

- State Pollution Control Board Award
  1st 2009-10

- State Energy Conservation Award
  3 star 2008-09

- State Pollution Control Board Award
  3rd 2003-04

- National Tourism Award
  3 star 2002-03

- National Tourism Award
  3 star 2001-02

- State Tourism Award
  3 rd 2000-01

- State Tourism Award
  3 star 1999-00

- State Tourism Award
  3 star 1998-99

- National Tourism Award
  3 star 1997-98

- State Tourism Award
  3 star 1997-98

- State Tourism Award
  3 star 1996-97

- State Tourism Award
  3 Star 1996-97

- State Tourism Award
  3 Star 1996-97

- State Tourism Award
  3 Star 1996-97

- State Tourism Award
  3 Star 1996-97

- State Tourism Award
  3 Star 1996-97
Conclusion

Marari Beach does not waste anything, even the land.
We consider all our waste as our wealth. 500 kilograms of wealth from 400 kilograms of waste!!!

Unspoilt sandy beach

Warmth of the people who welcome you to this experience

At Marari Beach, in quaint Alleppey, we have ensured that your experience encompasses
the people that lent life to them. We believe that a holiday comes alive only when the
hotel breathes the life of the community around it be it the flavors of the fish curry as
only boatmen can serve, the rhythm in the song of the fisher folk as they haul in their
catch or the amazing simplicity in the way they thatch their roof with palm fronds.

A string of magical experiences is yours to savor.
Rooted in reality, verging on fantasy.
Mixing stories from the past and dreams of the future.