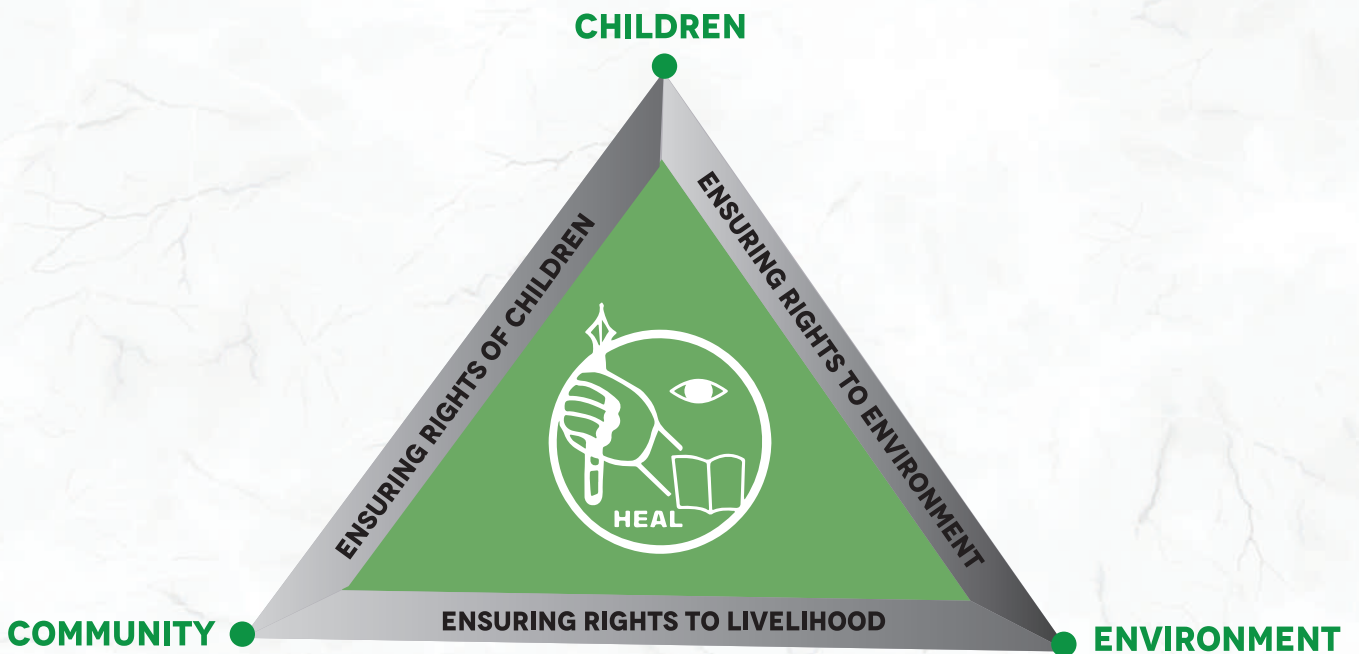




HEALing the Green



ABOUT US

Human Education and Action for Liberation Movement abbreviated as HEAL Movement is a non-profitable grass root level voluntary organization with its activities focusing on community empowerment of disadvantaged people and environment protection since 1984 in Kanyakumari and Tirunelveli Districts.

VISION

HEAL visualizes a green world with permissible emission of greenhouse gases to reduce global warming and preserve the ecosystem.

MISSION FOCUS

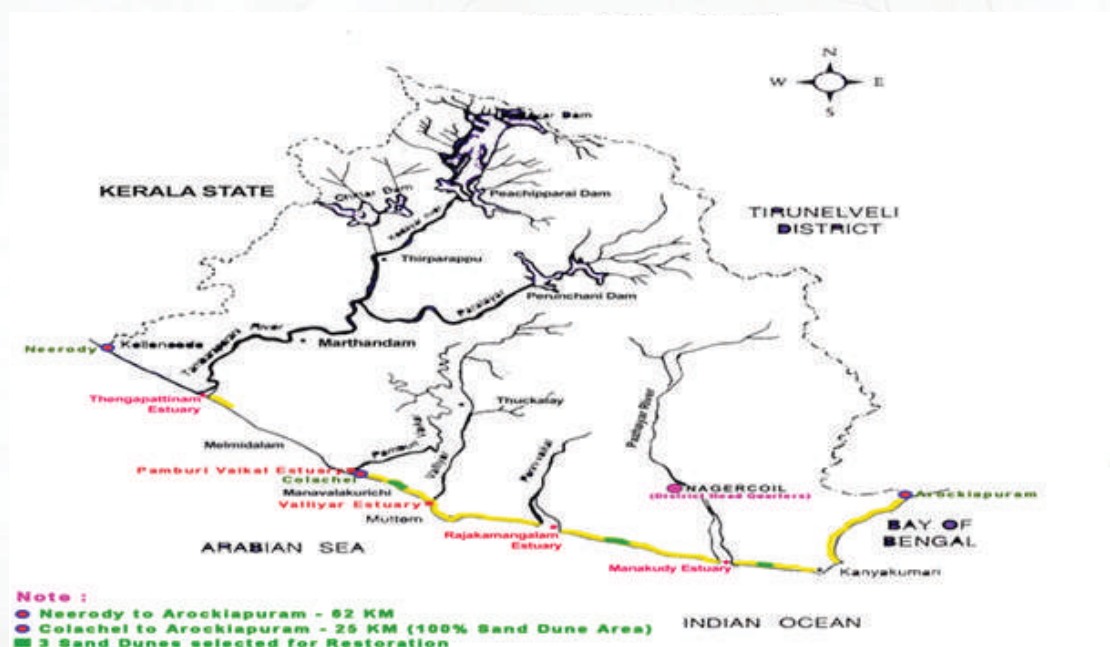
Our mission focuses on two thematic areas; first, to restore the natural resources – water bodies, flora and fauna – and second, to ensure the ecological rights of youth and children through their participation in the restoration and preservation of natural resources.

TARGET GROUP

Youth, children and public from the rural areas are our primary target group. The rationale behind the choice is that they have access to water bodies, flora and fauna that constitute a sustainable ecosystem.

ECOSYSTEM OF KANYAKUMARI DISTRICT

Kanyakumari district has unique ecosystem of the ancient Dravidian civilization. The district is divided into four distinct ecosystems based on topographical features of the soil. They are Kurinchi, Mullai, Marutham and Neithal. Kurinchi represents Western Ghats mountainous range with thick forest cover, Mullai represents diverse tropical horticultural social forests, Marutham represents vast tracts of paddy fields and finally Neithal represents 61 KM long sea shore and sea along the district. These four ecosystems are interlinked with one another only in this district in Tamilnadu.



BIODIVERSITY OF THE DISTRICT

The district enjoys rich biodiversity and diverse ecosystem. The Western Ghats Mountains are enveloped by timber, non-timber trees, horticultural plants, and a host of medicinal plants. Mullai regions inhabits coconuts, bananas, cashew nuts, tapioca and many other fruit bearing trees, plants and roots. Marutham region – historically known as the granary of the erstwhile Travancore Kingdom – is home for wide variety of indigenous rice plants. Neithal is equally important for the rich Biodiversity as the sand dunes are home to 24 varieties of sand dune specific plants and trees. Besides, they are breeding ground for sea turtles. Another unique feature is that five estuaries along the coastal belt sustain the estuarine ecosystems such as mangrove forests, both freshwater and marine fishes and birds. Moreover, wetlands are spread out all through the four eco- regions of the district.

THE CHALLENGES

Commercialization of agriculture, particularly rubber and cardamom along the Western Ghats mountain foothills and felling of timber trees has destroyed about 20 % of the ecosystem of the forest cover. Rubber plantations have penetrated into the bio-rich Mullai social forest cover. Another major threat is the continual increase in the application of chemical based fertilizers and pesticides, many of which are banned by WHO. The sand dunes which act as wind and sea wave barrier have been systematically destroyed by the local fishermen community through a social system called Mahimai. They paid a heavy price for their mistake during the deadly 2004 Tsunami. The destruction of sand dunes facilitates the seepage of sea water into the interior and the wells – the source of drinking water along the coastal area are filled with saline water. The government of Tamilnadu declared the southern part of Kanyakumari as bird sanctuary in view of its rich bio ecosystem in 2012. However, the sewage from the Nagercoil urban areas is directed to the wetlands and ponds in the sanctuary.

OUR INTERVENTION

Our intervention in coastal environmental protection started in a small way in 1992 when EQUATION, a Bangalore based NGO assigned us the task of conducting a survey on the pollution of the Kanyakumari coast and sea by solid waste through tourism promotion activities. The findings on coastal environmental degradation were submitted to Equation and government departments. Our intervention got an impetus after the 2004 deadly Tsunami.

SAND DUNES

We noticed that those coastal villages protected by high sand dunes suffered minimum destruction whereas those villages with little sand dune cover suffered huge devastation. This enabled us to sensitize the community to abandon their age old anti-environment custom of 'Mahimai'. Indian Rare Earth Limited (IREL) excavated the rare mineral sand deposits from Kottilpadu village and thereby causing depletion of sand dunes. The processed sands – tail end sands – had been dumped into the deep sea. We sensitized the management and motivated them to dump the sand along the coast. Today a huge sand dune stands as testimony of our intervention. In the meantime, we restored sand dunes in 30 coastal villages with financial support from Green Coast and TdH / BMZGermany.

We involved children and youth in planting saplings on the sand dunes to promote ecological right consciousness in the minds of the children.



ESTUARY

Estuarine ecosystem is part of the broader marine ecosystem. We identified two estuaries along the coast for restoration. To begin with, we removed the solid waste from the estuaries with the support of local community, particularly youth. Then we introduced an innovative KEM (Kumar Encasement Method) method to plant estuarine specific plants. In this regard, Dr. Santhana Kumar, technical consultant and Vice President of HEAL Movement, played a proactive role to restore the estuaries.

Within a span of eight years, we planted 50,000 saplings of Rhizophora and Avicenna. We also introduced another local innovation to protect the estuaries from effluent pollution from coconut based coir manufacturing units which release ret liquor from their factories directly into the estuaries. To prevent the contamination, we raised reed beds of Cyber grass along the mouth of estuary through which such ret waters flow into the estuary and pollute the water with higher level of sulphide. The reed beds absorbed the sulphide and maintain the purity of the estuarine water and the fish stock in the estuary.



PONDS AND WELLS

Ponds and wells along the coast have been the source of clean drinking water and service water to the coastal community for centuries. It is unfortunate that they are heavily polluted by solid waste disposal and contaminated by seepage of sea water. We cleaned 18 ponds and 34 wells in 30 coastal villages once again with the help of local community, particularly youth. Bunds had been created around the restored ponds and saplings planted on the bunds to strengthen them against erosion. The wells had been closed with grilled iron plates to control the solid wastes from falling into them.



ECO CLUBS IN SCHOOLS

Eco Clubs had been promoted in 33 schools in the coastal villages with the objective of instilling ecological child rights deep into their heart through their proactive involvement in protecting and conserving the ecosystem. Each Eco Club has 30 members who raise and maintain 32 school gardens which contain vegetables and fruits. They manure it with organic manures and use eco-friendly pesticides. The harvested yields are purchased by the members, Parent/Teacher Association members or noon meal center cooks. The children understand the importance of poison free vegetables and the parents realized the cost effective cultivation available in their backyards. Many parents replicated school gardens in their backyards and roof top gardens.

During summer the schools do not get water for the gardens which faced the risk of withering. Hence we motivated the school managements to construct 32 rain water harvesting structures in their schools to ensure availability of water throughout the year.



CLEANING AVM CANAL

AVM Canal (Ananthan Victoria Marthanda Varma canal) was built by the erstwhile Travancore King in the 19th century to facilitate water transport along the coast and the indirect benefit was that it acted as a shield against seepage of sea water into the interior villages. After independence, the state administration and the local governing bodies ignored to preserve it. Under the pretext of urbanization, the canal underwent encroachment in many areas. To add fuel to the fire, the local community used the canal as a vast dust bin to dispose solid waste. By the turn of the 21st century, it became a polluted sewage with poisonous gases. HEAL undertook an effort to clean a portion of the canal in collaboration with the district administration and erected barbed wire fences to prevent solid waste from entering into the cleaned area. Inside the caged area, fresh water fish fingerlings had been released to sustain the pilot plot from further pollution. It is played a main role to prevent the Sea Water inside the inland.



FUEL EFFICIENT IMPROVED KILN FOR SEA SHELL WORKERS

We are equally concerned about global warming caused by emission of carbon dioxide into the atmosphere. The 10,000 plus sea shell workers have been baking dead mollusk sea shells in open traditional kilns to produce lime powder to earn their livelihood. The traditional kilns emit huge quantities of carbon smog which envelop the entire settlement for many hours until they dissolve into the air. This process not only affects the community health of the community but impacts negatively the environment and ecosystem. The birds do not build nests and breed their offspring in the trees. Moreover, the tender saplings of any flora wither under thick smog which further pollutes the water bodies

Hence we contacted the scientists in National Institute of Technology (NIT) and Dr. Siva Ramakrishnan, the technical consultant to convert our idea to design a fuel efficient environment friendly scientific kiln that emits smog over the village through 60 feet long chimney with carbon filters. The Technology was accepted by the India Innovative Initiative – i3 Regional Fair 2011 organized by Department of Science and Technology. Later Dr. Siva Ramakrishnan did his doctorate on this technology for his thesis. This Kiln is now functioning in Puthukudiyiruppu settlement in Kanyakumari district.



NETWORKING

HEAL is not restricting its activities within the boundaries of Kanyakumari district alone. Rather it is concerned with the macro level issues that impact the environment and ecosystems positively. In this regard, HEAL was a member of the Tamilnadu Environmental Council (TNEC) – a state level environmental forum – which launched a campaign – 2009 in Tamilnadu which flagged off in Kanyakumari district . Mr. Nammazhvaar inaugurated the campaign to create a separate ministry for irrigation like other neighboring states of Kerala, Andhra Pradesh or Karnataka to address issues related to irrigation water. The result was positive as the Chief Minister of Tamilnadu created a separate ministry.



THE OUTCOME

The outcome of the above mentioned interventions are highly impressive. The local community is aware of the proactive health benefits of clean water bodies. Hence they abolished the destructive Mahimai system in all the coastal villages to conserve the restored sand dunes as well as the existing sand dunes. To sustain the purity of water in restored wells and ponds, the local community formed ponds and well protection committees separately with more than 50% youth participation. The sand dunes are also being constantly monitored by sand dune protection committees. The improved kiln consumes 40% less coal against traditional kilns and the environmental degradation is comparatively low.

THE IMPACT

The children get healthy poison free food as they maintain school gardens and home gardens. They are also insisted on getting hot water from schools and homes. There has been a slow but steady increase in the height of sand dunes in many villages. The growth of saplings along the banks of estuaries has invited a wide variety of fauna, particularly fiddle crabs which are slowly increasing their colonies.



The mushrooming colony of Fiddler Crabs along the estuary bank

Ensure Ecological Child / Youth Rights



HEAL Movement

📍 22 C, Scott Nagar, Near Scott Christian College,
Nagercoil - 629003, K.K. District, Tamil Nadu

✉ heal_m@hotmail.com, siluvaivasthian@gmail.com

☎ +91 9443449943, 8870898141