

## Nadukuppam Environmental Education Centre

In 2003 Pitchandikulam Forest began working with a rural Government High School at Nadukuppam to develop environmental awareness programs in conjunction with the existing curriculum. An Environment Centre has been built on the school campus with its primary focus the conservation and restoration of the remaining forests and wetlands. When we first began working in the school the academic pass rate was just 10%. There were only six teachers and five classrooms for 575 students. No water facilities or toilets were available, and there were only two trees in the school compound. Since then we have seen a dramatic improvement. With a 69% pass rate in 2008 and many activities and projects set up through the site, NEEC has substantially improved the educational opportunities of the students.

### Infrastructure and Site Development

Work at the NEEC site has established a variety of ecologically friendly systems and infrastructure. An indigenous plant nursery has been created with Tropical Dry Evergreen Forest species as well as indigenous crops. It is maintained by trained members of the women's self help groups. A pilot organic vegetable garden produces food for the midday school meals. 2500 indigenous trees have been planted within the School compound and a 3 acre Ethno-medicinal forest has been established with detailed signage explaining the uses of the plants. To ensure a clean and constant water supply a bore well, water tanks, hand pumps and drinking water systems have been installed, and an integrated sanitation system designed and built. This system recycles and cleans water from the new bathrooms and toilets through the use of effective micro-organisms (EM), fountains and a lagooning system. This recycled water is then used in the demonstration gardens and nursery. Solar photovoltaics are now in operation to pump water and supply electricity. Four new classrooms have been built to address the severe shortage, and existing buildings have been improved through provision of benches and decorative murals. School buildings were painted and signboards erected displaying pictures of the indigenous flora and fauna. After observing the many developments at Nadukuppam High School, the CEO Villapuram constructed two new school buildings and recently completed a new NABARD school building. Recently we have began a Fees for Trees program where students who can not afford to pay for their school fees have a way to remain in the school.

**Educational Program** These material developments combined with the introduction of an Environmental Education Curriculum now provide students with both stimulating surroundings and learning facilities. Twenty young teachers have been trained in innovative teaching methods based on student centred education. The curriculum strategy is aimed at Primary and Middle level students and involves creating teaching materials related to our bioregion and providing a dynamic learning experience through hands-on activities, exposure trips, eco-clubs, nature camps and workshops. Through links and collaboration with the Education Department and surrounding communities, the teachers are now implementing the Environmental Education Program in twenty schools within the Kaliveli coastal bioregion - sixteen in Villapuram and four in the Kanchipuram District. **Community Involvement and Education** NEEC is providing a point for community involvement in integrated rural planning and sustainable development. A new centre for the activities of the Womens' Self Help Groups, especially for income generating programmes has just been completed. This provides an excellent base for many of the outreach activities that Pitchandikulam Forest operates in the nearby communities, encouraging environmentally friendly initiatives such as indigenous plant nursery development, organic agriculture and medicinal plant cultivation.

Twenty-five acres adjacent to Nadakuppam High School has recently been developed under the Kaliveli Environment Education Trust. This area provides a demonstration site for the community and school in organic farming techniques and agri-forestry. New crops particularly medicinal plants, flowering plants and vegetables have been introduced to the local farmers. Training for local farmers is being given in organic agriculture, system of rice intensification (SRI) and vegetable gardening using vermi-compost, effective micro-organisms (EM) and natural insect control methods. The medicinal plant garden in NEEC field was established and student workshops are held frequently to instruct the community in the use of medicinal plants in primary health care.

### Future Activities

NEEC now plays an essential role in the community and has become a research and teaching space to bring biodiversity back to the Kaliveli Bio-Region. The continuing growth of the NEEC forest will provide students with the opportunity to observe regeneration of a diverse and rich bioregion. A spirulina production unit has been installed and will provide further nutrition to the school health drinks.

By involving the community and schools, NEEC is focused on ensuring that the importance and benefits of conserving the natural environment is understood and acted upon by those who rely on it most.