

# Echoes of Eco



MARCH, 2009

Vivekananda Kendra- nardep Newsletter

Vol:1 No:1

## Welcome to the world of VK- nardep



This is the logo of Gramodaya – a Technology Park at the campus of Vivekananda Kendra. The park has live models as well as panels depicting Holistic concepts in Shelter, Water Management, Sustainable Agriculture and Holistic Medicine.

VK-NARDEP works in the field of sustainable technologies for the rejuvenation and sustainable development of India – with a focus on the following fields:

- Construction technologies,
- Water management,
- Holistic medicine,
- Sustainable agriculture,
- Renewable energy and
- Inner sustainability.

This newsletter is an attempt to spread the message of green-technologies, holistic world view and global harmony. It offers you a glimpse of what activities VK-NARDEP is involved at present and what are the urgencies which drive our work.

We seek your feedback, inputs and support in this endeavor.

**In the Logo**

**The Tree** represents the herbal world, food, fuel, fiber, fertilizer, fodder, medicine and the earth that supports all.

**The Sun** is the ultimate source of all energies, physical, vital, mental, intellectual and spiritual.

**The Clouds** represent prospects, hopes and dreams and elevated awareness.

**The wavy blue water** shows the dynamically flowing water as the elixir of life.

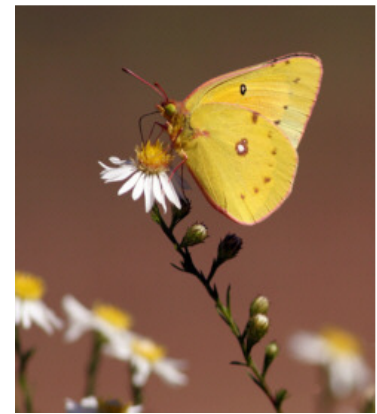
**The Swan** symbolizes the living wisdom and the discriminating intelligence – Viveka.

All of these contribute to a better and holistic life.

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- Message of the month...
- Construction Technology
- Water Management
- Holistic Health
- Sustainable Agriculture
- Renewable energy
- Inner sustainability
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- Visions of Wisdom

## Home with Nature



*There is peace in heavenly region; there is peace in the environment; the water is cooling; herbs are healing; the plants are peace-giving; there is harmony in the celestial objects and perfection in knowledge; everything in the universe is peaceful; peace pervades everywhere.*

*May that peace come to me!*

Ancient Indian Prayer

-Shanthy Mantra-



*Earth is my Mother and I am Her child. – Atharva Veda*



## Cost-Effective Construction Technology

Cost-effective construction technology is just not about reducing the economic cost but also reduction of energy cost and environmental cost involved in the construction of buildings.



*The aesthetically pleasing building belonging to women self help groups, was built through cost-effective technologies.*

In the case of conventional building technology the cost of construction is as of now Rs 450 per square feet. But in the case of cost-effective and eco-friendly construction the cost is reduced by 20-25 percent per square feet.

A functional demonstration of cost-effective construction is the *Avuai Agam* - a building belonging to Amuthasurabhi Self Help Group Federation for rural women. An aesthetically pleasant building it incorporates various salient features of cost-effective technologies that VK-NARDEP propagates. Some of these include:

**Walls:** Bricks made of FAL-G (Flyash Lime and Gypsum bricks) First quality bricks with compressive strength of 120 kg per square cm.

**Flooring:** Traditionally polished with red oxide.

**Roofing:** Ferro-cement roofing channel with one-side width more than the other.

**Doors:** Ferro-cement doors which are aesthetically pleasing and eliminates timber -saving the trees.



*Former Collector of Kanyakumari district, Ms. Jyothi Nirmala examines a Ferro-cement door.*



*Low-cost toilets like this one built by Vivekananda Kendra help a long way in rural sanitation.*



*Technology Resource Center of Vivekananda Kendra-NARDEP: Such buildings built through low energy intensive, low cost technologies can earn India carbon credits in International markets.*

## Cost-Effective Construction and Carbon Credits

The Carbon-di-oxide emission and the resultant global warming have made the world community to take the hidden costs or ecological costs (or external) into the economics of building.

The carbon credits are evaluated on the basis of the differences in carbon emissions between regular materials used in the building industry and those built through alternative technologies. Today the international environmental organizations are trying to arrive at carbon matrices for building by studying the kind of material used for construction, the lighting efficiency of the building, its temperature regularizing mechanism that can cut off AC bills etc.

In the coming decades the 'carbon credit' is going to become an important issue for developing countries - particularly India and China. Today the international market prices, for carbon credit per ton of CO<sub>2</sub> vary from \$10 (app. Rs 490) to \$12 (app. Rs 598). So the cost-effective building technologies that minimize the use of high energy intensive components like burnt bricks, steel etc. apart from helping the common people of India to own affordable and adorable houses, also help India earn Carbon credits.



## Water Management



Though 70% of Earth's surface is water, 97.5% of it is salt water. Only 2.5% of this is freshwater. Less than 1% of this 2.5% amount of freshwater is accessible as the majority is frozen in ice caps or exists as soil moisture.

Meanwhile the growing human population is using the dwindling water resources in an accelerating phase. Water is also embedded in the food we take. In coming years the cost of the food may also take into account the embedded water in it which so far is not at all cared for.

So how do we conserve water?

VK-NARDEP has discovered the solution in the age-old wisdom of India – rain water harvesting. India has been gifted by its tradition one of the most efficient rain water harvesting as well as water management structures – anywhere to be seen in the world. If we can revive these water temples and create new ones with community participation we can conserve water, and use water in an eco-friendly way and also recharge the ground water which is fast getting depleted.

In the dry district of Ramanathapuram, VK-NARDEP renovated the traditional water harvesting structure *Oorni* through community participation. In the same way it also introduced roof water harvesting techniques in the houses of the arid district. Apart from these, VK-NARDEP has also renovated the temple tanks (below).



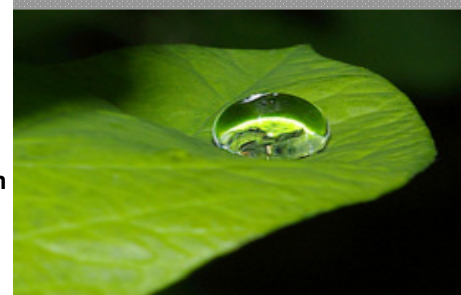
BEFORE  
Renovation



AFTER  
Renovation

National level conference on "Innovative Methodologies in creating Drinking Water Security in India"

The event was held at Trivandrum on March 9<sup>th</sup> and 10<sup>th</sup> respectively. The event was organized by Dept of Drinking Water Supply, Govt. of India. After the meet the participants came to VK-NARDEP, Kanyakumari for a visit. At Kanyakumari, the delegates visited the Gramodaya Park and attended an introductory interactive session on our activities. Sixty participants from all over India attended the conference.



*An interactive session is in progress for the participants of the National level conference on "Innovative Methodologies in creating Drinking Water Security in India at Gramodaya Park auditorium.*





## Sustainable agriculture



India is the land of agriculture. The advent of agriculture saw the indiscriminate use of chemical fertilizers and pesticides. This resulted in poisoning of our farms, soil, water and our food. The law of diminishing return also has set in on Indian fields. The result is that farming has become a profitless job and many farm lands are getting converted into commercial complexes.

VK-NARDEP approach to sustainable agriculture consists of the following:

- Efficient harvesting of sunlight
- Efficient water utilization
- Integrated pest management
- Integrated soil management
- Ensuring field biodiversity
- Integration of farming systems

The different farming sub-systems like the livestock, homestead and field – are all interrelated by the flow of matter and energy. These links are diversified and made efficient through sustainable technologies. The technological interventions are integrated with the farming system so that they make the farmer self-reliant in terms of the agro-inputs as well as the food of the household

The technological interventions include the construction of vermi-compost units; back yard Azolla cultivation; guinea-bag based kitchen gardens in hilly terrains to mention a few. Mixed cropping as well as intercropping are encouraged with the farmers. Common service centers are started in the selected villages. Every week farmers get together and discuss the problems they face and also share their success stories.



Farmers meeting in progress: Vivekananda Farmers Association, Kozhikottupothai, Kanyakumari district, Tamil Nadu



Backyard Azolla cultivation

## This month programmes

Workshop on Azolla cultivation was held at Jammu sponsored by Jammu Natural Resource Development Co-operative Ltd., There were 60 participants. Dr. Kamalasanan Pillai was the resource person for this happened that happened on 6<sup>th</sup> and 7<sup>th</sup> of March.

Two Workshops on Azolla cultivation were held at Athalavillai village and another at Technology Resource Center of VK-NARDEP on 25<sup>th</sup> and 28<sup>th</sup> respectively. The resource person for both the camps was Smt.Premlatha. 53 farmers attended both the workshops.



Backyard Azolla kit was given to each participant in the workshop.



Demonstration of backyard Azolla cultivation shown to the participants of the workshop. The Azolla workshop at Athalavillai was sponsored by NABARD.

Consider the individual patient and the nature of disease and the season of occurrence, and then let the physician proceed with caution to cure the disease – Thirukural [95:9]



## Holistic and Indigenous Medicine



Ancient and indigenous health care knowledge systems are at the brink of extinction. Herbal health care methods, cost-effective techniques of bone-setting, disease diagnosis etc. are being lost on the one hand and on the other the medical expenses are increasing for the ordinary person. Change in lifestyle, Conservation of local medicinal resources and health care knowledge systems are the answers to this problem that we are facing today.

VK-NARDEP is striving towards creating green and healthy villages through reviving home herbal gardens and also harnessing Varma – an ancient health and martial art technique by providing it as an effective and economic therapeutic technique for the masses.

Herbal health-care products are also prepared and marketed by rural women's self help groups.



## Programmes this month



Health Camp inauguration at Athalavillai village on 24<sup>th</sup> March by Dr. V. Ganapathi.

**Green Health Home** which was open for 9 days treated 291 patients.

**10<sup>th</sup> March:** Mass free medical camp was held at Yogi Ramsuratkumar Ashram, Kanimadam. Siddha and Varma therapies were provided for 220 patients. Sindel, Zimga Medical Trust, Nagercoil sponsored these camps.

**24<sup>th</sup> March:** Mass free medical camp was held at Swami Vaikundar Hall, Athalavillai. Siddha and Varma therapies were provided for 153 patients. Another camp was held at the Community Hall of the nearby Kozhikottupottai. Here 52 patients were treated. NABARD sponsored these two camps.

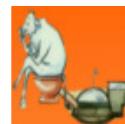
Dr. Ganapathi was the resource person for these camps.



Free Green-Health Camp at Athalavilai, Kozhikottupothai and Kanimaddam : March 2009







## Renewable Energy



In developing countries like India the energy crisis is affecting the people in many ways. While the commercial energy is completely concentrated in the urban India, the rural India which supports more than 80 percent of Indian population is dependent on such primary fuels like fuelwood or direct burning of the cow dung etc. These methods are not efficient in terms of fuel usage. They pollute and they are health hazards to the rural women folk. Hence it is essential that viable technological alternatives are discovered for efficient energy usage by rural people. Biogas and biofuel technologies can provide this alternative to the rural India.

In fact given the dwindling of our energy resources, they can also provide alternative technologies to the urban energy crisis as well. VK-NARDEP has considerable experience in dissemination of biogas technology streamlined for end-users. The biogas manual published by Vivekananda Kendra has been a useful tool for decades for installation, maintenance as well as problem-free usage of biogas plants.

The biogas technology is integrated with biogas slurry based outputs in the VK-NARDEP package. This has led to the integration of this technology with the agriculture of the farmer. Thus the homestead and farm are integrated.

Some of these packages include:

- Biogas slurry based Azolla and BGA cultivation.
- Slurry enriched vermi-compost and vermi-tea
- Slurry enriched bio-formulations



*Biogas slurry enriched bio-formulations are prepared and marketed by Farmers' club at Kozhikottupothai.*

## Programmes this month

- Dr. Kamalasan Pillai attended a conference on *Methane to Market* at India Habitat center on the 3<sup>rd</sup> and 4<sup>th</sup> of this month. The conference was arranged by The Energy Research Institute (TERI), New Delhi.
- *Shakthi Surabhi* biogas training camp was held at Technology Resource Center of VK-NARDEP on 27<sup>th</sup> of March. The resource persons were Er.Ramakrishnan and Sri. Muneeswaran. 13 persons underwent training. .

**Shakthi Surabhi** is a portable biogas plant that can be installed in the house. The input for this biogas plant is the kitchen waste and any edible waste material.

Thus it reduces the waste and pollution problem. It also provides cooking fuel.

The nutrient rich slurry is also a good compost making material and can be used for kitchen gardening.



*This March a Shakthi Surabhi plant has been commissioned to a rural woman Smt. Annavadivoo (Kanyakumari).*



*A neem cake based biogas plant at Technology Resource Center of VK-NARDEP*



## Inner Sustainability



Inner sustainability involves being at peace with one self and nurturing peace through the inter-personnel relationships. It needs finding the abode of peace inside one's own being.

VK-NARDEP programmes on personality development take into account the multi-dimensioned nature of personality and cater to each of these constituents namely the physical, the mental, the emotional, the intellectual and the spiritual.

It is essential that we need to be harmonious within if we are to be in harmony with the nature. Hence VK-NARDEP realizes that the sustainable living ultimately depends on the individual and hence making the individual realize the inner peace and the connectivity he or she shares with the entire existence is one of the important goals of the personality development programmes VK-NARDEP conducts.

## Programmes this month

### Motivation workshop for Cooptex staff

- First workshop was conducted from 28<sup>th</sup> Feb to 2<sup>nd</sup> March and was attended by 69 staff members.
- Second workshop was conducted from 7<sup>th</sup> March to 9<sup>th</sup> March and was attended by 79 staff.
- The resource persons were N.KrishnaMurthy, Sr. Saraswathi and Sri.Ramakrishnan.

**Students visit:** 70 students from Amrita Vishva Vidyapeetham, Amrita School of Engineering visited our Technology Resource Centre and Gramodaya park to understand the eco-technologies in Indian context.



Free Spoken English classes sponsored by NABARD.



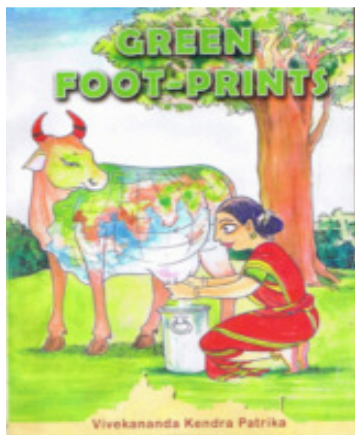
Participants collectively inaugurate the motivation camp for Cooptex Staff from Chennai.



Participants do Yogic stretching at Motivation camp for Cooptex staff held at VK-NARDEP, Kanyakumari.



## New Publication



Green Foot-Prints brings together the eco-wisdom from the living heritages of all humanity with specific relevance to a developing nation and an ancient civilization like India. The book consists of four parts.

The first part, Sacred Green enumerates how care for environment was embedded into our day to day culture and is part of our way of life. How the sense of sacredness flowers into Ecological Intelligence.

The second part is the Greening of Human Intelligence. This showcases the works of several activists and thinkers of this century, who created awareness globally about the hazards of blindly imitating the western life style.

The third part Green Diversity shows how the irreplaceable Bio-diversity got displaced due to industrialization and the rearguard steps needed to be taken to reinstate it.

The fourth part Green Systems deals with the steps taken by various peoples' initiatives in safeguarding the traditional knowledge systems, an invaluable asset which the so-called developed countries owe to the developing ones.

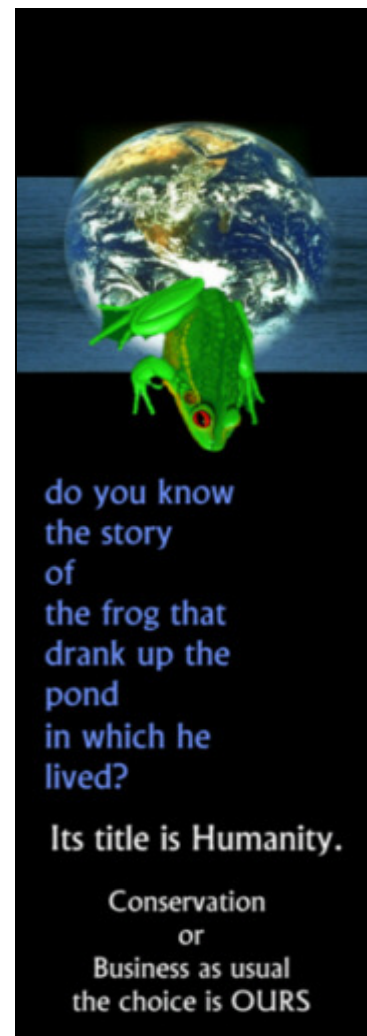
All together this book lucidly presents all the various aspects of one of the most pressing need of the hour for the whole humanity.

The book combines wisdom of experiences and vision of experts with wonderful cartoons which bring out the concepts forcefully.

Mahatma Gandhi, Fritjof Capra, James Lovelock, Vandana Shiva, Pachauri and many other eminent holistic thinkers and achievers share their vision in the pages of this book.

An Inspiring guide to the soul of any one interested in sustainable development and the future of humanity's children - that is: This is for everyone.

Green Foot-Prints  
Vivekananda Kendra  
Vol-36 No.1 Issue no: 71  
Price: Rs 125/-  
Pages: 274





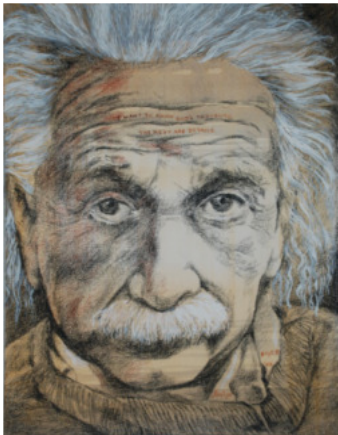


### Expansion is Life

A human being is part of the whole, called by us "Universe," a part limited in time and space. He experiences himself, his thoughts and feelings as something separated from the rest - a kind of optical delusion of his consciousness.

This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole [of] nature in its beauty.

- Albert Einstein



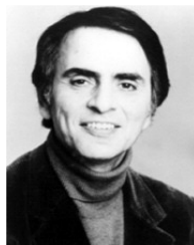
### A pale blue dot

The Earth is a very small stage in a vast cosmic arena. Think of the rivers of blood spilled by all those generals and emperors so that, in glory and triumph, they could become the momentary masters of a fraction of a dot.

Think of the endless cruelties visited by the inhabitants of one corner of this pixel on the scarcely distinguishable inhabitants of some other corner, how frequent their misunderstandings, how eager they are to kill one another, how fervent their hatreds. Our posturing, our imagined self-importance, the delusion that we have some privileged position in the Universe, are challenged by this point of pale light.

Our planet is a lonely speck in the great enveloping cosmic dark. In our obscurity, in all this vastness, there is no hint that help will come from elsewhere to save us from ourselves.

- Carl Sagan



### Progress of Science

Take anything before you, the most material thing — take one of the most material sciences, as chemistry or physics, astronomy or biology — study it, push the study forward and forward, and the gross forms will begin to melt and become finer and finer, until they come to a point where you are bound to make a tremendous leap from these material things into the immaterial. The gross melts into the fine, physics into metaphysics, in every department of knowledge.

- Swami Vivekananda

