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A Centre of Excellence of the Ministry of Environment, Forests & Climate Change, Govt. of India.

C.P.R. ENVIRONMENTAL EDUCATION CENTRE

Established in 1989

- ✯ **1980** - The C.P. Ramaswami Aiyar Foundation starts nature education for teachers and students.
- ✯ **1989** - C.P.R. Environmental Education Centre (CPREEC) established jointly by the Ministry of Environment and Forests and the C.P. Ramaswami Aiyar Foundation as a Centre of Excellence of the Ministry of Environment and Forests. Government of India.

Our Mission

- ✯ To increase knowledge, awareness and interest among the public about the environment in all its aspects
- ✯ To develop resource materials for environmental education and awareness raising
- ✯ To conduct training programmes for a wide cross-section of people
- ✯ To take up environmental projects for demonstration and research

Our Activities

- ✯ Training and awareness raising
- ✯ Awareness to and through action
- ✯ Awareness programmes in ecologically fragile areas
- ✯ Conservation of the ecological heritage
- ✯ Research and surveys
- ✯ Generation of resource materials
- ✯ Exhibitions
- ✯ Courses, seminars and symposia

Facilities

- ✯ Environmental Laboratory
- ✯ Library
- ✯ Computer Division
- ✯ Publications Division

Geographical Spread

CPREEC's activities extend to

- ✯ Andaman & Nicobar Islands
- ✯ Andhra Pradesh
- ✯ Goa
- ✯ Karnataka
- ✯ Kerala
- ✯ Maharashtra
- ✯ Orissa
- ✯ Tamilnadu
- ✯ Puducherry

NGO Network

CPREEC has an extensive network of about 600 NGOs. All educational programmes are carried out in partnership with select NGOs, Universities, Colleges and Schools.

Publications

- ✯ Activity and information books and pamphlets for children
- ✯ Environmental training guides and kits for teachers
- ✯ Researched Publications
- ✯ Colourful and informative posters
- ✯ *ECONEWS* - A quarterly magazine
- ✯ *Indian Journal of Environmental Education*, a peer-reviewed journal

Exhibitions

CPREEC designs three new exhibitions every year and has a bank of mobile exhibitions that travel all over India.

Environmental Education

- ✯ Green Schools of India (GSI)
- ✯ Training programmes for Teachers
- ✯ Training programmes for School and College Students
- ✯ Environmental Law Education

Special Projects

- ✯ National Green Corps (NGC)
- ✯ Biomedical Waste
- ✯ Biodiversity Conservation

Research and Surveys

- ✯ Sustainable Technologies
- ✯ Surveys of Natural Resources
- ✯ Socio-Economic Surveys
- ✯ Lab to Field Technology Transfer

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Parks - The need of the hour for Chennai

Dr. P. Sudhakar

Chennai started with a land cover of 69.9 Sq kms in 1871 and the expansion was very slow during the pre-independence era. However Chennai grew at a very much faster rate after independence especially in the last two decades. Available data on urban expansion of Chennai shows that the City has expanded approximately at the rate of 1 Sq. Km per year from 1871 to 1971. The urban area has rapidly increased in the last 40 years, an average increase of 25 Sq. Km per year. The Chennai city has grown by 1,683% in about one and a half centuries.

The rate of urbanization is much faster in the last decade when compared to early periods (Rahman, 2007). The increase in urban landscape especially of the cities is quite expensive. Several capitals of Indian states have increased their urban scale by leaps and bounds. Though the cities have expanded by large proportions, the quality of city environment has improved little. One of the major indicators of the environmental quality of an area is the green cover (EPI, 2010). The percentage of green cover in several cities of India is very meagre and has not increased proportionately (Chaudhry, Bagra, & Singh, 2009).

Green space is one component of biodiversity management and the most obvious. Biodiversity is the living diversity of nature. Trees in cities and towns, in parks and gardens provide a wealth of benefits relating to biodiversity. Urban parks support a great variety of wildlife and are the only refuge to certain

birds, squirrels, insects, butterflies, bats and bees.

As per WHO norms, the green space per person in a city should be at least 9 m^2. The green space in cities includes wide variety of greeneries namely avenues, urban forests and parks. In majority of the cities in India, with a few exceptions the urban forest concept is poorly implemented. However the considerable percentage of green space is contributed by parks

Chennai started with just 2 parks in 1935 and the number of parks increased to a meagre 13 in the next 3 decades. Currently Chennai City has a total of 270 parks.However, the increase of green space in the form of parks was far from adequate. The urban parks apart from providing green and open space for recreational purposes also provide a number of ecosystem services. Ecosystem services are defined as "the benefits human populations derive, directly or indirectly, from ecosystem functions" (Costanza *et al.* 1997). According to Bolund and Hunhammar (1999), trees in

urban areas offer a variety of ecosystem services like air and water purification, rain water recharge, noise filtering, health, microclimate stabilization and biodiversity conservation.

Parks being the lung spaces of cities, it is the responsibility of every citizen to safeguard them. More constructed areas for providing public amenities such as play ground, skating rink, meditation centres etc., reduce the green space of the parks. Several parks in Chennai are dominated by such constructions. A few parks in Chennai also harbour religious statues. In Hindu mythology trees like *Azadirachta indica* and *Ficus religiosa* are considered to be sacred. People who visit parks regularly start worshipping the trees, which eventually leads to placement of an idol that further leads to the construction of a permanent structure. A tendency that is observed in several parts of Chennai and its suburbs is that a temple structure slowly expands and encroaches into the public space. Hence, what exists as small idols or structures today might grow into well established temple engulfing the park space. Sivan Park in K.K. Nagar has already met with this kind of encroachment of green spaces.

Most of the parks are developed in the open space revenue lands, which are under the control of the government. Whenever there is any need and urge for the improvement of infrastructural facilities, green spaces are considered as "land banks", one such infrastructure development project is the Chennai Metro Rail Project, which has taken over a few parks like May Day Park, Thiru. Vi Ka Park, Nehru Park and Ashok Nagar 1st Avenue Park. The first 3 parks mentioned above are among the oldest and biggest parks in Chennai, forming the lung space for the residents of the respective areas.

More over the concept of parks is yet to creep into the suburbs. Since the industrialisation is being concentrated more in the suburban areas, the Corporate Sector can be asked to take up the responsibility of maintaining parks and other open spaces. Parks should be places for recreation as well as education. Signage boards, with information regarding the botanical name, family, conservational status, ethnobotanical value, distribution etc. should be provided in parks.

Reference

- Bolund, P. & Hunhammar, S. 1999. Ecosystem Services in Urban Areas. *Ecol. Econ* 29: 293 – 301.
- Chaudhry, P., Bagra, K. & Singh, B. 2011. Urban Greenery Status of Some Indian Cities: A Short communication. *Int. Jour. Env. Sci. & Dev.* 2. Issue 2.
- Costanza, R., d'Arge, R., de Groot, R., Farber, S., Grasso, M., Hannon, B., Limburg, K., Naeem, S., O'Neill, R., Paruelo, J., Raskin, R., Sutton, P. & van den Belt, M. 1997. The value of the world's ecosystem services and natural capital. *Nature* 387: 253 – 260.
- Rahman, A. 2007. An Integrated Geo-spatial Approach for Monitoring Urban Environmental Management Issues and Challenges in India. In: Singh, A.L. & Fazal, S. (Ed.), *Urban Environmental Management.* B.R. Publishers, New Delhi. pp. 76 – 105.
- EPI, Environmental Performance Index Report, 2001. Yale University.

Celebrating Island Biodiversity 2014

Dr. T. Sundaramoorthy

Introduction

During the Earth Summit, one of the most important agreements reached was the Convention on Biological Diversity (CBD). The Convention on Biological Diversity came into force on December 29, 1993. The anniversary of this date has been designated as the International Day for Biodiversity.

The International Day for Biodiversity is part of a series of activities to focus attention on the Convention of Biological Diversity. A symbol is also attached to this convention.

The various themes of the International Day for Biodiversity since 2003 are given below:

Year	Theme
2002	Dedicated to forest biodiversity
2003	Biodiversity and Poverty Alleviation – Challenge for Sustainable Development
2004	Biodiversity : Food, Water and Health for All
2005	Biodiversity : Life Insurance for our changing world
2006	Protect Biodiversity in dry lands
2007	Biodiversity and Climate Change
2008	Biodiversity and Agriculture
2009	Invasive Alien Species
2010	Biodiversity, Development and Poverty Alleviation
2011	Forest Biodiversity
2012	Marine Biodiversity
2013	Water and Biodiversity
2014	Island Biodiversity

International Day for Biological Diversity, 2014

The Secretariat of Convention on Biological Diversity (CBD) announced "Island Biodiversity" as the theme for the International Day for Biological Diversity (IDB) for the year 2014. Interestingly, the theme coincides with the designation of the United Nations General Assembly of 2014 as the "International Year of Small Island Developing States".

In addition, the theme was chosen to correspond with decision XI/15, paragraph 1 in which the Conference of the Parties to the CBD *"urges Parties, and invites other Governments, financial institutions and other relevant organizations to strengthen the*

implementation of the programme of work on island biodiversity".

Islands and the surrounding area provide a unique habitat for a variety of plants and animals, of which, many are endemic. This unique eco system supports the livelihood of the local population. One tenth of the world's population (600 million) is living in the islands. Hence, the theme provides an opportunity to strengthen the initiatives taken by island nations towards the conservation of island biodiversity.

C.P.R. Environmental Education Centre (CPREEC) observed International Biological Diversity Day by organizing programmes in the states of Andhra Pradesh, Telangana, Karnataka, Odisha, Tamil Nadu and the Andaman & Nicobar Islands.

Andhra Pradesh

The programme was organized at Edurumondi Island located at a distance of 7 kms from Guntur and Krishna district, at the mouth of the Krishna River and Bay of Bengal. About 60 participants comprising of fishermen and women from the islands of Edurumondi, Nachugunta, Eelachetladibba and Sorlagondhi participated in the programme. Mr. Naidu Babu Rao, Sarpanch of the Edurumondi village presided over the programme held at the Government Primary School.

Mr. P. Suresh Kumar, Assistant Director of Fisheries, Krishna District inaugurated the programme and stressed the need for island biodiversity conservation. Mr. CH Nagababu, Fisheries Development Officer, Avanigadda area spoke on the livelihood of island dwellers and their role in protecting island biodiversity.

Four varieties of vegetable seeds comprising of ladies finger, bottle gourd, *Thotakura* and *Gongura* were distributed to the participants.

Telangana

In Telangana, the programme was organized at Singamary Thanda, Kowdpally Mandal in Medak district for the villagers. A total of 42 villagers benefitted. The key resource persons were Mr. R. Sabesh, Senior Environmental Education Officer, CPREEC, Mr. Sathish, CEO of Seva Sangam (NGO) and Mr. V.M. Naik, Sarpanch of Singamary Thanda.

The major topics covered were, the richness and biodiversity wealth of Telangana, water conservation for protecting biodiversity through appropriate technologies, the importance of social forestry and various schemes of Government of India with special focus on Biodiversity Monitoring Committees (BMC) formation and its procedural aspects, dry land agriculture, healthy food habits, organic farming, ecological traditions of Telangana and sustainable development.

The participants were provided with 2 mango saplings for planting in their houses to motivate them towards biodiversity conservation.

Karnataka

Karnataka State Office organized the programme in collaboration with the Karnataka State Pollution Control Board (KSPCB) and Uttara Kannada Jilla Vignana Kendra (District Science Centre) in Karwar. A total of 55 students from eco clubs from different schools and some nursing students participated.

All the participants went on a field visit to the Kalimatha Sacred Mangrove

Islands. Dr. Roshman, Central Marine Fisheries Research Institute (CMFRI), Mr. Gurudev Prakash, Environmental Officer, KSPCB, Karwar and Dr. V.N. Nayak, Professor, Post-Graduate Centre for Marine Biology, Karnataka University, Kodibag, Karwar, were the resource persons. They travelled with the participants to the Mangrove Islands. They shared their knowledge with the participants and explained in detail the importance of mangroves and its role in biodiversity conservation.

Dr. V.N. Nayak spoke on Biodiversity richness of Kalimatha Sacred Mangrove Islands. A film on Nethrani Island and Marine Biodiversity was screened for the participants. The students visited the Bio-fuel Demonstration Centre. Ms. Vimutha Nayak explained in detail the importance of bio-fuel and how it is generated. The resource persons, participants and office bearers of District Science Centre, Karwar planted saplings to commemorate International Biological Diversity day at their premises.

Odisha

The programme was organized at Paikarapur M.E. School, Phogal Panchayat, Nischintakoili Block, Cuttack District. A total of about 50 farmers and fishermen participated. Mr. Dhirendranath Behera, Ex-Sarpanch and village head spoke about the problems faced by the villagers due to loss of biodiversity and the natural calamities taking place in this coastal hamlet. Mr. Prabhakar Mishra, Social Worker, Mr. Balabha Chandra Palai, President, Paribar (NGO) and Mr. Nigamanada Bhuain, Secretary of Kadamni Charitable Trust also participated in the programme.

Dr. Sudarsan Sasmal, Principal Scientist (Retd.), Central Rice Research Institute (CRRI), Cuttack interacted with the participants. He spoke to the farmers about the ill effects of using pesticides in agriculture as it affects the fertility of the soil. He also said that due to excess application of fertilizers, the water is also contaminated. This in turn also affects the fishes. Dr. Sasmal guided the participants in choosing appropriate crops for plantation in their fields and stressed the importance of practicing organic farming.

Tamil Nadu

To commemorate International Biological Diversity day, an awareness programme and field trip for farmers, youth and forest officials was organized at Longwood Shola, Kotagiri, The Nilgiris. A total of 30 participants from Kotagiri and the surrounding villages participated.

Mr. S. Udyakumar, Range Officer, Kotagiri Range, Nilgiris North Division inaugurated the programme and explained the need to protect the hill eco system for the wealth of the plains. He stressed the importance of protecting the Sholas of the Western Ghats particularly the Nilgiris for combating Global Warming and its effects such as change in climate, rise in sea level, impact in agricultural pattern, etc. Mr. R. Komahan, Environmental Activist, gave a talk on the ill effects of Global Warming and the various conservation measures to be adopted to protect the nature and natural resources.

Mr. K.J. Raju, Secretary, Watchdog Committee, Longwood Shola took the participants inside the Shola. During the field trip the diversity of the Sholas and the natural water generating systems were shown and explained to the participants.

Andaman & Nicobar Islands

CPREEC's Field Office at Port Blair organized two programmes as part of

International Biological Diversity Day in the islands.

The first programme was organized at the G.B. Pant Hospital Auditorium for Health Workers and Nursing trainees. Dr. Avijit Roy, Deputy Director, Directorate of Health Services inaugurated the program. He spoke about the inter-relation between human health and biodiversity and the importance of island biodiversity conservation.

Mr. Deb Kumar Bhadra, Technical Officer, Indian Institute of Geomagnetism, Port Blair spoke on the island biodiversity richness and the key role played with regard to livelihood, economy and well being of islanders. Mr. A. Goapl, Project Officer, CPREEC spoke on the endemic biodiversity richness of the Andaman and Nicobar islands.

The second programme was organized in collaboration with the Forest Extension and Publicity Division, Department of Environment and Forests, Andaman & Nicobar Administration at Burmanallah village for Panchayat Raj Institute members, students, fishermen and general public.

Mr. B.P. Yadav, District Forest Officer (DFO), Forest Extension and Publicity Division spoke on the importance of the role of biodiversity in our lives and the need to conserve our forests, floral and faunal wealth, marine species, etc. He also said that we should curtail the use of plastics as it poses a major threat to the environment.

Mr. A. Gopal, Project Officer spoke on the need for organic farming in the islands for the conservation of island biodiversity. A short film on **Slow Poisoning of India** was screened and all the participants and resource persons took part in the signature campaign on both the days.

Smt. Mamuna, Pradhan, Beodnabad Gram Panchayat planted seedlings of ornamental and fruit bearing plants in the campus of Beodnabad Gram Panchayat. Students, farmers and fishermen of Burmanallah village planted about 100 mangrove saplings on the degraded coastal stretch near Burmanallah Bridge.

Conclusion

The United Nations had declared the years between 2011 and 2020 as a Decade on Biodiversity. The stakeholders felt the importance of conserving locale specific biodiversity to secure their livelihood and the need to strengthen coastal and mangrove biodiversity to safeguard them from natural calamities.

Mr. Sathish, CEO, Seva Sangam addressing the participants on organic farming and sustainable agriculture

Participants at the Kalimatha Sacred Island

A nursing student planting a sapling to mark International Biological diversity day at District Science Centre, Karwar

Dr. Sudarsan Sasmal, Principal Scientist (Retd.), Central Rice Research Institute (CRRI), Cuttack interacting with the participants

Participants at Longwood Shola, Nilgiris

Panchayati Raj and the Management of Natural Resources

R. Sabesh

Introduction

Panchayati Raj is a decentralized form of Government, where each village is responsible for its own affairs, with gram panchayats as the basic units of administration. Panchayati Raj institutions play prominent roles in maintaining the sustainablity of the natural resources in villages. Now-a-days environmental concerns have come to the fore at the international level and also find a place in the national government agenda. Environmental matters in Europe have even become election issues. In India, there is a growing awareness about the depletion of our natural resources. The Chipko movement is an indicator of what people can do to protect the natural habitat from possible degradation through urbanization, industrialization and so on. However the local institutions that have been in the cutting edge of protecting the natural resources are steadily dwindling due to various anthropogenic activities. Now the need for efficient local governance and strengthening of rural institutions like Panchayats are keenly felt. This is evident from the 73rd constitutional amendment and the consequent passing of various state panchayat laws to further the decentralization efforts. In India, almost all state legislations pertain, in one way or the other, to the management of natural resources through Panchayats.

Natural resource management concerns

Various studies of natural resources in rural areas reflect the rapid dwindling of such resources. Apart from population explosion, there is either a lack of institutional mechanism or lack of adequate powers to local institutions to protect and regulate the use of natural resources (Blair, 1996).The village panchayat is responsible for maintaining and managing the natural resources - particularly the common resources like village forests, grazing land, tanks, water shed areas, ponds, lakes etc. The majority of the panchayats are vested with the responsibility of sinking and repairing of wells, repair and maintenance of ponds /tanks, conservation of unreserved forests, etc. They market the yields from common property resources such as fish, forest produce, etc. to generate revenue for the village.

Panchayati raj and rural development

The pertinent question that crops up at this juncture is how far the benefits accrued from the natural resources of the community fulfill local aspirations, needs and demands. Evaluation of the Tamil Nadu Social Forestry programme indicated that the majority of the output from tank forest plantation was not used to meet local demands for fuel wood, but rather misused for meeting various other urban needs. The panchayats utilized the revenue generated from the disposal of natural resources for meeting administrative expenditure and other local development work such as repair of roads, schools and drains. However, it is questionable to what extent the work undertaken by the village panchayat

benefited the rural poor. At present, panchayats, mindful of higher income, continue planting non-browsable plants on lands meant for grazing (Chambers et.al.1989). A World Bank/USAID team, after touring Uttar Pradesh, Gujarat, Himachal Pradesh and Rajasthan, found that the commercial species planted by the Forest Department on grazing lands has tempted the Panchayats to sell the produce in the markets, rather than distribute them among the villagers. According to Jodha, the traditional management systems for natural resources (involving usage regulations, enforcement of user obligations and investment for conservation and development) are no longer being followed. The traditional informal authority of village elders has been usurped by the feudal landlords in some areas. In Jodha's opinion, the village panchayat is generally unable to enforce any regulation about common resources because of their dependence on community votes. They avoid unpopular measures like enforcing user obligations for natural resources. There is undue dominance by the influential persons in the village who have with little interest in conserving natural resources. Beyond the enactment of panchayat laws way back in 1950's, no further steps have been taken for effective use and management of resources. Furthermore, the neglect of village-level institutions for managing resources such as forests is directly correlated to their vanishing control over such resources. (Singh, 1993) and Blair (1996) find that the democratic politics is compatible with both privatisation and centralization as conserving strategies, though not necessarily successful.

Local user groups, however, are better able to manage the natural resources because they can restrict membership and thus avoid free riders and they can also impress upon their members the cost-benefit ratios. There are numerous instances of indigenous local groups conserving and nurturing local natural resources. But there are few examples of local government bodies, on their own initiative, having successfully maintained the village common resources.

There is a need for examining ways and means of strengthening these bodies for better management of natural resources and for evolving suitable policies.

After the 73rd amendment, much euphoria has been created about Panchayat Raj Institutions as symbols of decentralization, empowering people to make their own decisions about themselves and their environment. Therefore, it is necessary to study the provisions in the Panchayati Raj Acts dealing with natural resources to ascertain what kind of control PRIs have over common
resources.

The following provisions are available in the Panchayati Raj Acts of several states: Development of wastelands; development and maintenance of grazing lands and prevention of their unauthorized alienation; planting and preservation of trees on the sides of the roads and other public lands under its control; fuel plantations and fodder development; development of social forestry; construction, repairs and maintenance of drinking water wells, tanks and ponds; development of fisheries etc. These functions confer rights to panchayats to control and derive income from the common natural resources available in their villages. The other powers and functions of the PRIs are regulatory and service oriented.

Conclusion

Natural resources, mainly forest cover is shrinking throughout our country. There

is a tendency on the part of local people to cut trees to generate revenue for spending money on temple construction and festivals. The trees have lost their value as an ecological support system. The poor use them for fuel while the rich use them for wood. While the poor have much reason to depend upon common village resources as in the past, it is the rich who are not justified in exploiting the resources for their personal benefits. The need of the hour is that the local community should meet often, articulate their needs, involve themselves in decision making and actually work towards securing the common goals. Local communities can also take the advantage of the National Rural Employment Guarantee Scheme (NREGS) and directly execute village level eco restoration activities with their livelihood assured through wages under the NREGS.

Reference

1. A Socio - Ecological Study of Common Lands inKarnataka, (Centre for Non-Formal and Continuing Education: Bangalore, 1987).

2. Kaul, M.C., "The Commons, Community and theCourts of Colonial Punjab", The Indian Economic and Social History Review, 29, 4, pp. 393-436.

3. The Karnataka Panchayat Raj Act, 1993, Government of Karnataka, Bangalore.

4. Gadgil, M. and Iyer, P. "On the Diversification of Common Property Resource Use by Indian Society", in Fikret Berkes (Ed)., Common Property Resources, Ecology and Community based Sustainable Development (London:Belhaven Press, 1992)

5. MacCay, B. and J.A.Acheson, The Question of Commons: The Culture and Ecology of Communal Resources. (Tucson : The University of Arizona Press, 1988)

'Environment and the Attitude problem'

Revathi Ramkumar

Being a true citizen of our country and born to achieve, I am sure that lots of questions, thoughts and worries related to the status of our environment will flash in our mind every now and then. Though our country is yet to achieve the status of 'Developed country', I am sure that it has achieved much progress and still on its way to go ahead.

In spite of all these efforts and achievements, the fate of our people in admiring the cleanliness of the other country still continues. Admiring is not a problem at all but the question when does our country is going to be admired by other nationalities is the talk of our soul and mind.

When the attitude of people towards maintaining the healthy environment goes down, there comes the term called 'environmental degradation'. Some of the worst behaviour followed by the careless people is listed below:

- Spitting on the road
- Defecating in the public place
- Riding a highly polluting vehicle
- Garbage filled roads
- Open sewage etc;

Parents teach their young ones to use washroom effectively when they are moving to the diaper free stage. Later, they are taught to handle dustbins. This is been taught to them for cultivating the habit of maintaining healthy lifestyle as part of their personal hygiene and create awareness on garbage free environment. Gradually, when an adult stage is been reached, each and every activity of the people in society is carefully watched and followed by young generation. Here the problem arises. The conscious of importance given to the 'cleanliness' gets completely vanished due to the irresponsible act of the careless people who are suppose to be a role model for the youngsters and people around them.

Before spitting, defecating or throwing garbage in the public place one should ask a question to themselves as 'Will I allow anyone to do all these stuffs in my house garden even if anyone in urgency or very close relative?' I am sure the answer would be completely 'NO'. It is because we have the common sense of knowing what to do and where to do. Being a six sense creature and very much bothered for our own place, why are we not applying the same thing for our society and country?

Instead of paying and visiting very famous magic shows which features the popular show of making a huge elephant to vanish within a second in front of us, there is an another way where we can feel and view the same thing with free of cost. Hope you are very eager to know the secret. The answer is given below.

Everyone knows that vehicle plays a vital role in very busy life. It could be two wheeler or three or four wheeler. Most of the vehicles seen are not serviced properly and thus producing heavy dark smoke which can even hide the people or vehicle behind them in a second which harms the environment as well as the

health condition. It doesn't mean that all the serviced vehicles are designed in an eco friendly manner and not polluting the environment. But as a human being we can at least try to reduce it by following some simple steps such as maintaining a regular service etc.

Similarly open sewage is an unbearable scene which can be seen in almost all the areas. It not only spoils the beauty of a place, but also brings numerous ill effects to human health and degrades the environment.

For instance, there are many countries where the strict rules are framed, followed and even fined if anyone carries on all the above mentioned shabby activities. Imagine ourselves residing in that kind of country and our attitude also remains the same. Then we would be the top contributor for paying the government in the name of penalty. But I am sure that we will change our attitude for the sake of penalty and strict law. In this case one should accept that we are behind someone's order but not behind our self conscious and self respect towards the country.

All these activities play a major role in the development of a country. The status of 'developing country' can be changed to 'developed country' by not only based on the economical conditions but also based on the maintenance of the country by the people. It is always easy to find fault with our own country in various aspects but one shouldn't forget that we are also one of the main cause of creating a mess.

Huge and tall attractive multiple storey building with many international projects worth million dollars, lucrative salaries, pubs, clubs, posh houses, expensive top model cars, international brand selling shops, luxury hotels and so on... Just visualise right now and I am sure it would sounds completely great and fantastic. It shows the class and development of our place. These stunning scenes can be seen at our own place which portrays the one side our environment.

All these are nothing but a part of life, not more than that. It doesn't mean that all these factors alone are highly enough for leading a perfect life. But the attitude towards maintaining our environment will beautify these things into scenic view. Being rich or poor is not a matter for showing the standard of living but being responsible and taking care of our own environment is the real standard for being a human being.

We are not in the days to fight for the cause of our country's freedom as it's been already done by our ancestors – freedom fighters with loads of struggle, pain, sorrows and finally made it in the year 1947. So, the only thing we are suppose to do from our part is to save our precious country's freedom by protecting our environment.

Perfumes in the Valmiki Ramayana

M. Amirthalingam

In India one can find references to the use of perfumes and scents right from the Vedic period. They were used mainly for religious practices, customs and domestic rituals. The women used perfumes and cosmetics as part of their makeup. The ancient Indians were aware of the medicinal values of many perfumes. For example, medicated fumigation *(dhupan)* was used in the treatment of diseases. Similarly, medicated oils, collyriums and powders were used in treatment. The practice of chewing betel leaves was also wildly prevalent so that the mouth could be clean and fresh. This was known as *thambulam*. Various scented oils were used to massage the body. This practice was known as *abhyanga*.

The *Ramayana* was written by Valmiki around 1000 BCE. Since the major events of the epic took place in the forest, one can identify India's forest wealth from the text. References can be found on the fragrance scented plants in the Valmiki *Ramayana*.

There are references in Valmiki's *Ramayana* to the use of traditional medicines and aromatics. Sandalwood figures prominently among the perfumes used in that period, as reflected in the *Ramayana*. Not only are two preparations of sandalwood, viz. *Candansara* and *Candanakalka* mentioned but it appears to have been widely used along the aloe wood to besmear the bodies of both men and women.

Some of the references that can be found in the Valmiki *Ramayana* are as follows - The sandal tree is used as a cosmetic anointment with *aguru* (Eagle wood, Aloe wood) (2.15.33). Its breeze is wafting and cleans with the intoxicating scent of sandal (2.71.28). It is a tree of Panchavati (3.15.18). The wind bore the fragrance of padma saugandhika (lotus) (4.1.104) and the water reservoirs were charming with fully blown *padma saugandhika* (lotus), *kumuda* (Indian water lily) and *utpala* (Indian blue lotus or water lily).

Jasmines, water-lilies and red oleanders had grown on the banks of the Pampa, and were giving out the fragrance of nectar [4-1-76]. Hanuman saw the city of Lanka looking like heaven, decorated by moats filled with lotuses and water-lilies (5-2-14). The breeze that wafts through the sandal trees was very invigorating and cleaned the atmosphere with the intoxicating scent of sandal (2.71.28).

The *arjuna* tree during the rains exudes a pleasant fragrance (4.30.25). Giant *arjuna* trees were used in bridge construction (6.22.56). The charming wild cinchona tree found in abundance in the Chitrakuta forest (2.94.9) bore flowers that perfumed the whole forest (4.28.41). *Punnaga* (Alexandrian laurel) was a valuable garden tree and its flowers yielded scented materials (5.10.23).

The body of Dasharatha (king of Ayodhya) was kept in an oil trough or *taila dronyaam*, in order to preserve the body from decay (2.66.15). During the cremation of Dasharatha's dead body *chandana* (sandal wood), sweet aloes and different fragrant essences, with heaps of *sarala* (*Chir Pine/Pinus roxburgii*), *padmaka* (Wild Himalayan cherry/ *Prunus cerasoides*), *agaru* (Agar wood/ *Aquilaria agallocha*), *devadaru* (Himalayan cedar/ *Cedrus deodara*) were used (2.76.16.17).

In the *Ramayana,* 95.9.27) it is mentioned that the air resounded with the cries of birds in heat and the fragrance of excellent perfumes. The palace of Ravana was splendid and hung with the best tapestries and other luxuries. Vibhishana, the brother of Ravana, caused to be brought various excellent varieties of firewood, the three sacred fires and logs of sandal wood, pieces of fragrant aloe-wood and sweet smelling perfumes for Ravana's cremation. The priests were also called in to perform the obsequies (6.111.106-7).

After Ravana's death, Vibhishana, full of grief, brought the body of Ravana to the consecrated spot. He then caused the sacred pyre to be built. Logs of sandal wood, moistened with perfumes called *Padmaka* and *Koshira*, were covered with the skin of black antelopes. Then the obsequies were performed in accordance with Vedic rites. (6.111.114-5)

Conclusion

Until the 20th century, all perfumes were made from ingredients derived directly from nature. The use of synthetic fragrance was borne of the industrial revolution of the early 1900's. Chemists were now able to artificially reproduce fragrances resembling flowers, fruits and woods in a laboratory with synthetic chemicals at a fraction of the cost. As is often the case, economics gave way to purity.

Of the 150 highest volume artificial chemicals used in fragrance products, almost 60% are known to be toxic at certain levels. In contrast to artificial fragrance, natural essential oils when added to skin care, make-up and natural perfume have quite a different effect. Essential oils contain elements that have a healing and stimulating biological effect on the body and an emotional effect on the brain. Evidence suggests that essential oils actually enhance mental health creating a feeling of well being and perpetuating uplifting states of mind.

Perfumes played a crucial role in providing the pleasant feel and improving the self-confidence of the people in India, since time immemorial. It is time to understand the importance of the therapeutic essential oils that make up the natural fragrances having healing elements that work on one's body, mind and spirit. The aim of this article is to understand this important heritage of India.

Reference

All the references are from *Srimad Valmiki Ramayana*, translated and presented by Sri Desiraju Hanumanta Rao (*Bala, Aranya* and *Kishkindha khanda*) and Sri K.M.K. Murthy (*Ayodhya* and *Yuddha khanda*) with contributions from Durga Naaga Devi and Vaasudeva Kishore (*Sundara khanda*) retrieved from http://www.valmikiramayan.net/.

Sanctity in Conservation

N. Kalyani

In India, a number of wildlife and plant species have been culturally and traditionally linked to local communities. There is also a religious linkage of people with their environment. The protection of sacred groves is a clear example of how conservation hinges on the community and their social, cultural, religious beliefs, and not on any external tough legislation. Hence, conservation is an intrinsic part of the community. The Bishnoi community led by Amrita Devi that protected the khejri trees in Rajasthan in the 18th century and the more contemporary Chipko Movement of the 20th century driven by Chandi Prasad Bhatt, a resident of present day Uttarakhand, are cases that point to the invincible attachment of the communities to their flora.

Often, if not always, it is the awareness in the people that leads to environment conservation and wildlife protection rather than strict legislation or the deterrent effect of punitive action. It is awareness and sensitization created in the people which leads to an understanding, appreciation and love for the environment and its protection. In present times, when trees and forests are being rampantly cleared for agriculture, housing, industry or infrastructure, it becomes vital to protect the existing flora.

It is, therefore, a welcome relief to see a book based on the sacred flora of India. Dr Nanditha Krishna and M Amirthalingam have, through their book, *Sacred Plants of India,* a Penguin Books' publication, highlighted the various religious and cultural aspects linked to trees in India. Dr. Nanditha Krishna, Director of the C.P. Ramaswami Aiyar Foundation and the C.P.R. Environmental Education Centre, is a historian, a prolific writer and author, and an environmentalist who has pioneered the documentation of the ecological traditions of India. In fact, she has also restored over fifty sacred groves. Co-author of the book, M Amirthalingam, an environmental education officer at the C.P.R. Environmental Education Centre is a botanist and author who is now working on the All India Coordinated Research Project on Sacred Grove Ecosystem Service Assessment in Tamil Nadu.

The book runs into 300 odd pages where the first part deals with the various religious and cultural contexts in which Indians have traditionally looked upon their surrounding flora. The second part gives a detailed description of 83 species of sacred plants and trees.

Dr Krishna aptly points out in the Author's Note, "We cut down trees and destroy forests without a thought for the ill effects on the environment and have taken the earth to the brink of major ecological problems like global warming and climate change." In the Introduction to the book, while the authors note that, "Sacred trees are generally associated with Hindu deities, Jaina Tirthankaras, and the Buddha," they also write, "Sacred trees form an important part of the ecological heritage of India. Most temples, towns and villages — and sometimes even Sikh temples and Muslim *dargahs*— are associated with trees." What is essential is that ecological protection transcends religion and the concept of conservation assumes a secular idea.

Trees were revered for their medicinal, economic, ecological, and socio-cultural

values. And while that pointing out, "Plant worship is probably the oldest form of religion...," the authors take us as far back as to the Indusâ€"Saraswati civilization when tree worship existed as seen in the seals obtained of the period. The peepal and the khejri trees are seen in a big way and the authors explain the fact through images and the imagery.

The book goes on to describe how the Vedas have gone into various issues of tree worship. The Vedas and the Upanishads have been quoted to explain how the tree was "the symbol of the Cosmic Tree". The authors state, "In the Vedic period, all of nature was, in some sense, divine — part of an indivisible life force uniting the world of humans, animals and vegetables." In other words, what we would translate today, scientifically, in terms of ecological balance and equilibrium.

Tree worship in the epics, the *Ramayana* and the *Mahabharata*, the *Puranas* and in Jainism and Buddhism has also been dealt with extensively. There is also a brief description of depiction of trees in age-old sculpture and astrology.

The chapter on sacred groves explains the whole idea of their conservation. "Thousands of (sacred) groves have been documented as storehouses of remarkable biodiversity, repositories of unique and rare plants, and homes to myriad birds, reptiles, and other animal species, representing a mini-biosphere reserve, making them an essential part of the conservation process.

Sacred groves probably represent the single most important ecological tradition of ancient Indian culture. Their conservation is a long tradition of preserving nature by giving it a spiritual dimension. There is a strong symbiotic relationship between the biophysical ecosystem and socio-economic institutions, with strong cultural linkages. Culture and environment have been regarded as complementary yet dynamic. The various cultural connections are expressed through myths and religious practices that celebrate plants, animals, forests, rivers, mountain, and precincts that are so essential to existence. The concept of the sacred in nature has protected much of India's biological diversity in a fast-changing world."

Interestingly and significantly, a new frog species, *Philautus sanctisilvaticus*, has recently been reported from the Amarkantak sacred grove in Madhya Pradesh. It is in the second part of the book that the individual plant species are described in detail with their common and botanical names, their distribution and characteristics. The mythological and religious associations are detailed that make for a very interesting reading. There are tribal stories, for instance, like fables. There are the religious and cultural associations of the tree and age old references as also the beliefs and practices and traditions still followed by people.

The medicinal uses of each of the species have also been given. The plant species listed include the commonly heard ones like the neem, bamboo, peepal, mango, banyan, rice, coconut, lemon, flame of the forest, turmeric and sandalwood, and the not-so-commonly heard ones like the Bermuda grass, downy jasmine, sand paper, clearing nut tree, prickly chaff flower, cannon ball tree, Bombay Atlantia, cotton-wool grass, and palmyra palm.

Sacred Plants of India is a book that will be of interest not only to environmentalists and conservationists but also nature lovers and those interested in having a small house garden. It is also meant for policy-makers and the common people to encourage greater participation in forest conservation. The detailed and inclusive research done for the book is indeed praiseworthy. The authors, however, can contemplate increasing the number of plant species described individually in further volumes or future editions.

Source : http://terragreen.teriin.org/index.php?option=com_terragreen&task=detail&section_id=2105&category_id=12

Orchids in the Nilgiris

M. Kumaravelu

The Nilgiris has a different type of vegetation as a consequence of the varying climatic conditions and geographical zones. In its geographical classification, the type of vegetation in the Nilgiris can be divided into six major types as in the varied elevation of hills. Sholas and Grasslands are found on the upper reaches from 1400 msl to 2200 msl. The grassland swamps are also found on this elevation adjacent to the Sholas and Grassland. These grassland swamps are the major sources from which many perennial streams originate. Down from 1500 msl to 500 msl, wet evergreen forests, semi evergreen forests, moist deciduous forests, dry deciduous forests and thorn & scrub forests are the major groups of vegetation. Most of these forest groups are unspoilt and lie within the reserve forest zones. About 3,300 species of flowering plants are found in this area; of which 132 species are endemic to this region. Numbers of orchids are also seen here. In the Nilgiris, the Botanical Survey of India recodes around 120 species in 49 genera of orchids. Many orchids have commercial and medicinal values.

Orchids

Orchids are one of the largest families of flowering plants in the world. Orchids are generally classified into two major groups. They are Ground orchids, and Tree orchids. The orchids that grow over the trees (Host trees) are called tree orchids. Although the tree orchids grow over the host trees, they cause no harm. Distribution of ground orchid species is less than the tree orchids. Most of the orchids are small herbs while a few are

climbers. Vanilla is one such climber species, which is being cultivated world wide as a cash crop.

Medicinal uses: Orchids are used for many medicinal purposes, to cure common ailments and also as a stimulant. The extracts from orchid's tubers, roots and fruits are being used by Ayurvedic & Yunani systems. The extract from some of the orchids is used in food items for flavour and to add taste. The extract from the vanilla fruit is used for making ice cream.

Orchids have commercial value because of their aesthetic, spicy, aromatic and medical properties. Since there are simple methods of growing and propagating of orchids, many people are showing interest in growing them. By providing suitable conditions, orchids can be grown on the roof, portico and passages. It is necessary to provide a suitable host plant, driftwood, etc., for the epiphytic orchids and rich soil with good moisture for the terrestrial orchids.

In the Nilgiris, on the upper reaches, thinning of sholas resulted in the disappearance of many orchid species. Such a threat has become common all over the Western Ghats. When the host trees are chopped down, the epiphytic orchids will become endangered in the process. However, orchids can be grown at smaller levels as mentioned above. Cultivation of selected orchids would fetch good income also.

Reference

1. Joseph.J. Dr. (1987), Orchids of Nilgiris, Botanical Survey of India.
2. Rao.A.S.Dr. (1995), India Orchids, National Book Trust, New Delhi.

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