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Nature

Biennial Multilingual Newsletter of SOFEC, DHSK College, Dibrugarh

(Special Issue)

VOL. 1 ISSUE-3 2014-15

eedback may be sent to
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From the Principal....

It gives me an immense pleasure to learn that the "SOFEC" is publishing a News letter "NATURE" 2015. I hope that the very purpose of its publishing is fulfilled and the Teachers and the students will be benefitted by it. While congratulating for your outreached external activities which are done from time to time. I am equally thankful to the SOFEC for the selfless and tireless efforts rendered in educating the students regarding the preservation and protecting of environment.

My best wishes to the SOFEC for continued success in its endeavour and for successful publishing of the "NATURE".

Principal
(Dr. A. Ahmed)

From the Editor....

Nature is a multilingual and multidisciplinary annual News letter published by SOFEC of DHSK College, Dibrugarh. I am very much pleased and honoured to take up the challenge responsibility of editing, this newsletter. This great endeavour of SOFEC provides a unique scope to our members to publish their current, significant and conceptual news items in literature, social sciences, humanities and also other relevant topics of course which are related to environment in order to save the entire environment from degradation. It also aims at highlighting of new areas of environment which is yet to be focussed.

Therefore, I hope and expect that this news letter will come out as a popular effective and attracting news letter.

I, on behalf of SOFEC organisation take this opportunity to share the credit to every members of SOFEC for their great contribution. The contribution made by the members will remain ever shinning in a printed form. May the members enjoy reading the news items which Nature contains the same?

From the President....

It gives me immense pleasure to place the publication of "Nature" which is generally published by the organisation SOFEC of DHSK College, Dibrugarh. It is a golden opportunity from my part to address the highest intellectual body of this organisation through this publication.

The SOFEC is working not within the four wall of the college, rather extending intellectual supports to the greater interest of the community as a whole. The SOFEC is actively working for the preservation of environment in general and in particular by planting trees in an around the college for freshness of air and to develop eco-friendliness.

Finally, I extend my heartiest greetings to all on the members of SOFEC for their great contribution to bring out "Nature" which is our annual news letter.

Once again I thank all the members for their generous cooperation, coordination and collaboration while working as a team members of the SOFEC organisation.

OFFICE-BEARERS AND EXECUTIVE MEMBERS OF THE CURRENT YEAR - 2014-15

Office - Bearers, Executive Members and Ex-Officio Members of the Current year 2014-15, elected in the General Meeting held on the 26th May, 2014.

OFFICE-BEARERS

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B)	President	:	Mrs. Kalpana Segupta Barua, Dept of Hindi
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ii. Dr. Mitali Chaliha, Dept. of Geography

SOFEC MEMBERS ON WORLD ENVIRONMENTAL DAY, 5th June, 2014

जंगल की अवैज्ञानिक कटाई और पर्यावरण पर इसका प्रभाव

Kalpana Sengupta Baruah
H.O.D. Department of Hindi
D.H.S.K. College, Dibrugarh

जंगल पर्यावरण का रक्षक स्वरूप हैं। पर हर विशाल देश के जनसमूह की विभिन्न आवश्यकताओं की पूर्ति के लिए वृक्षों की अंधाधुंध कटाई जारी है। प्रकृति के संतुलन बिगड़ जाने का कारण भी कटते जंगल ही है। वनभूमि का अतिक्रमण भी विभिन्न कारणों से होती है। विशाल जनसमूह की खाद्य उपजाने के लिए, पशुओं को चराने के लिए, रास्ते, रेलमार्ग, कारखाने, हवाई अड्डे और नए-नए गाँव-शहर बसाने के लिए भी भूमि की माँग निरंतर बढ़ती ही जा रही है जिसके फलस्वरूप जंगल की कटाई जारी है। आज भी वन उत्पादों की माँग में बढ़ोत्तरी हो रही है क्योंकि इमारती लकड़ी, सामान्य लकड़ी, कागज, पैकिंग के लकड़ी इत्यादि के लिए वृक्षों को लोग काटे जा रहे है। अकसर अवैज्ञानिक ढंग से जंगल विनाश के कारण वनाच्छादित जगहों का निरन्तर विघटन का विषैला परिणाम वन्य प्राणियों के आवास स्थली का नष्ट होना, कम हो जाना है। आवास स्थल की कमी के कारण जीवकूल असहाय तथा दिकभ्रमित है। कई जीवों की प्रजातियाँ लुप्त हो गई या फिर लुप्त होने की कगार पर खड़ी है।

जंगल विघटन का गहरा प्रभाव वायुमंडल पर पड़ता है। तापमान बढ़ जाता है जिससे गर्मी तेजी से बढ़ती रहती है। बारिश कम होना या न होना, भूमि की सूखाग्रस्त अवस्था भी कटते जंगल का ही परिणाम है। जंगल धरा की जीवनदायिनी शक्ति है। वृक्षों की जड़े मिट्टी को एक साथ बांधे रखते है। इसके विनाश से बाढ़ आती है और उपजाऊ जमीन धूलधूसरित होकर बंजर बन जाती है। इसी तरह धीरे-धीरे मरूभूमि विस्तारित होगी। एक चिन्ताजनक बात यह है कि वायुमंडल में कार्बन-डाई-ऑक्साइड की मात्रा बढ़ती ही जा रही है। साथ ही साथ यह भी सत्य है कि दिन व दिन पर्यावरण प्रदूषण बढ़ता ही जा रहा है जिसके परिणाम स्वरूप मानव ही नहीं समस्त जीवकूल के सामने अस्तित्व संकट मंडरा रहा है। जंगल की कमी के कारण नदियों की गतिधारा भी बाधाग्रस्त होगी और प्रवाह भी अनियमित तथा अनियंत्रित होकर विकट समस्या खड़ी करेगी।

अब दुनिया पर्यावरण सम्बंधी समस्याओं से जरित जिस दौड़ से गुजर रहा है उसमें अवैज्ञानिक ढंग से जंगल की कटाई, एक एहम् भूमिका निभा रही है। हमारी पृथ्वी को बंजर होने से बचानी होगी जिसके लिए जरूरी है मानवीय सचेतनता, एकाग्रता और गहरी निष्ठा। धरती माता को हरियाली की अवैज्ञानिक कटाई पर रोक थाम में बढ़ोत्तरी करने के साथ वृक्षारोपण के कार्यक्रमों को बढ़ानी होगी।

২০০২ চনৰে ১২ আগষ্টৰ দিনা

বচনা-সুৰ
কল্পনা সেনগুপ্তা বৰুৱা
সহযোগী অধ্যাপিকা, মূৰব্বী, হিন্দী বিভাগ
ডি. হ. সু. কানৈ মহাবিদ্যালয়, ডিব্রুগড়

২০০২ চনৰে ১২ আগষ্টৰ দিনা,
কানৈ কলেজৰ কোলাত উজ্বলিল
এখনি নতুন সমাজ,
প্রকৃতি প্রেমী, পৰিবেশ কর্মী
এখনি সুঠাম সমাজ
নামেই যাৰ পৰিচয়
সেয়া আমাৰ প্রাণৰ চোফেক (SOFEC)

২০০২ চনৰে ১২ আগষ্টৰ দিনা,
পৰিবেশ সংৰক্ষণৰ বাবে
বৃক্ষৰোপণ মহামন্ত্রে
জিলিকালে যিয়ে কলেজ প্রাঙ্গন
কৃষ্ণচূড়াৰ হাঁহিৰে
সেউজ সপোন যাৰ আধাৰ
সেয়া আমাৰ প্রাণৰ চোফেক (SOFEC)

২০০২ চনৰে ১২ আগষ্টৰ দিনা,
মনত আছে দৃঢ়পন
পৰিবেশ সুৰক্ষাৰ বাবে
কাম কৰি যোৱাৰ মন,
বিশ্বপ্রেম যাৰ আধাৰ
সেয়া আমাৰ প্রাণৰ চোফেক (SOFEC)

WETLAND CONSERVATION: THE NEED OF THE HOUR

Dr. Bharati Dutta
Dept. of Geography

Biologically the most diverse ecosystems are the wetland ecosystems. They contain a great variety of plants and animals. Plants like mangrove, water lilies, edges, black spruce etc. Reeds are commonly found in marshes. Aquatic plant species found in wetlands are valuable sources of food animals and human beings. Fishes are available in wetlands. They are important source of protein. A large number of people depend on these aquatic fauna for their livelihood. Wetlands also contain plants of medicinal values. Wetlands provide navigable waterways, regulate climate, provide drinking water, fodder, fuel, house building materials etc. They act as places for recreational activities, mitigate floods, trap suspended solid particles, and protect shorelines against erosion. Wetlands are the excellent sites for pisciculture and also resting sites of migratory birds.

Wetlands cover approximately six percent of the earth's surface. In India there are 54.2 million hectares of wetlands scattered across the country. In Assam there are 3513 wetlands covering about 10/23/06 square km of total geographical area of the state.

Keeping in view the importance of wetlands it is necessary to take steps for their conservations. Because at present there is degradation as well as loss of wetlands at an alarming rate, pressure of population, industrialization, urban sprawl etc. are some of the causes of degradation and loss of wetlands specially in developing country like India. Large scale conversion of privately owned wetlands is very common in India. Wetlands are converted to highlands to be used for some other economic purposes. Dumping of urban wastes in the wetlands has gradually led to the shrinkage of the wetlands and at some later stage there has been complete loss of the wetlands. There is sudden loss of wetlands when they are filled up for human settlement or for some other purposes.

The degradation of wetlands as well as loss of these valuable ecosystems is mainly due to overuse, misuse and abuse by human beings. Judicious use of the wetlands is the need of the hour. Boating, fishing etc should be done in a restricted way. Garbage should not be dumped in the Wetlands. Conservation of wetlands involves various aspects like water management, conservation of biodiversity, socio-economic issues etc. Therefore, an integrated approach is needed for the conservation of wetlands.

INDOOR AIR POLLUTION:

Dr. Sikhamoni Sarmah
Dept. of Chemistry

Like air, water and soil, the environment inside buildings, offices and houses also have several pollutants. They have adversed effect on the health and comfort of building occupants besides making indoor air quality bad. Internal air quality can be affected by gases, particulates, microbial contaminants etc.

The most important indoor air pollutant is Radon (Rn) gas. Being a heavy gas, it tends to accumulate at the floor level. It is emitted from building materials like bricks, concrete, tiles etc. which are derived from soil containing Radium (Ra). Radon is also present in groundwater and natural gas and is emitted indoors while using them. This gas and its radioactive daughters are responsible for a large number of lung cancer deaths each year. The half life period of Radon is 3.8 days, indicating that once source is removed, the hazard will be sufficiently reduced within a few weeks.

Many houses in the under developed and developing countries including India use fuels like coal, dung-cakes, wood and kerosene in their kitchen. Incomplete combustion of fuel produces the toxic gas carbon-monoxide (co). Coal contains different amounts of sulphur which on burning produces SO_2. On burning, fossil fuel produces black shoot. These pollutants i.e. CO, SO_2, soot and many others like formaldehyde, benzo-pyrene (BAP) are toxic and harmful for health. BAP is also found in cigarette smoke and is considered to cause cancer. A housewife using wood as fuel for cooking inhales BAP equivalent to 20 packets of cigarette a day. Tobacco smoke which affects people other than the "active smoker" contain both gaseous and particulate pollutants.

There is an acceptable level of asbestos fibres in indoor air. Many common building materials like floor tiles, ceiling tiles, taping mud, insulation materials contain asbestos. Normally, significant release of asbestos fibre does not occur unless the building materials are disturbed by cutting, drilling etc. Inhalation of asbestos fibres over long exposure is associated with increased incidence of lung cancer.

Volatile organic compounds (VOC's) are emitted as gases from certain solids or liquids. VOC's include a variety of chemicals some of which have short and long term adverse health effects. Concentration of many VOC are higher in indoor (upto 10 times) than outdoors. VOCs are emitted by a wide variety of products like paints and lacquers, paint strippers, pesticides, building materials and furnishings, office equipments like copiers and printers, correction fluids and carbonless copy paper, graphics and craft materials including glues and adhesive, photographic solutions etc. VOC"s are organic chemicals which have low boiling point causing a large number of molecules to evaporate or sublimate from the liquid or solid compounds and enter the surroundings, eg:- HCHO, which evaporates from paint. Chloninated drinking water releases $CHCl_3$ When hot water is used in the home. Overheted cooking oil emit acrolein and formaldehyde. Paints, varnishes, many cleaning, disinfecting cosmetic, degreasing products contain organic solvents. All of these products release organic compounds during uses and storage. Several initiatives are taken to reduce indoor air co-ntamination by limiting VOC emission resulting in the availability of increasing number of low-emitting materials in the market.

Houseplants together with the medium in which they are grown can reduce components of indoor air pollution particularly the VOC such as benzene, toluene and xylene. As reported, the most effective household plants.

Include aloe vera, English ivy and Boston fern for removing chemicals and biological compounds. Plants can also reduce airborne microbes, molds and increased humidity which can itself lead to increased level of mold and even VOC.

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ভাৰতবৰ্ষৰ একমাত্ৰ বনমানুহ বা 'এপ্ন'- হলৌ বান্দৰ

ড০ মৰমী তালুকদাৰ
সহকাৰী অধ্যাপিকা, নৃতত্ব বিভাগ,
ডি. হ. সু. কানৈ মহাবিদ্যালয়।

ভাৰতবৰ্ষৰ অতি দুৰ্লভ বন্যপ্ৰাণী হলৌ বান্দৰ (Hoolock Gibbon) অসমৰ কোনো কোনো অৰণ্যত পোৱা যায়। হলৌ বান্দৰ বা Hoolock Gibbon, ভাৰতবৰ্ষত পোৱা একমাত্ৰ বনমানুহ বা 'এপ্ন'। হলৌ বান্দৰৰ বৈজ্ঞানিক নাম Hoolock hoolock, হলৌ বান্দৰ নামৰ এই বনমানুহ বিধ ভাৰতবৰ্ষৰ ভিতৰত অসমকে ধৰি উত্তৰ-পূৱ ভাৰতৰ কেইখনমান ৰাজ্যতহে দেখিবলৈ পোৱা যায়।

মাটিত থিয় হ'লে হলৌৰ উচ্চতা হ'ব প্ৰায় তিনি ফুট বা তাতকৈ অলপ কম। ইহঁতৰ হাত দুখনৰ দৈর্ঘ্য ভৰিৰ প্ৰায় দুগুণ, শৰীৰৰ ওজন ছয়ৰ পৰা আঠ কেজি পৰ্যন্ত হ'ব পাৰে। হলৌ বান্দৰৰ মতাবোৰৰ গাৰ বৰণ ক'লা হয় আৰু পূৰ্ণ বয়স্ক মাইকী হলৌৰ গাৰ বৰণ হয় খয়েৰী বা মুগা বৰণৰ। কিন্তু অপ্ৰাপ্তবয়স্ক মাইকী হলৌৰ গাৰ বৰণ হয় ক'লা। হলৌ বান্দৰৰ মুখৰফালে চালেই এটা বস্তুৰে সকলোৰে দৃষ্টি আকৰ্ষণ কৰে। সেইটো হৈছে হলৌৰ বগা এযোৰ চেলাউৰি।

এই আপুৰুগীয়া বন মানুহবোৰ সৰু সৰু দলত বিভক্ত হৈ ক্ষুদ্ৰ পৰিয়াল গঠন কৰি আমাৰ অৰণ্যবোৰত বাস কৰে। এটা এটা দলত দুটাৰ পৰা ছটা হলৌ দেখিবলৈ পোৱা যায়। হলৌ বান্দৰৰ এই ক্ষুদ্ৰ ক্ষুদ্ৰ দলবোৰে অৰণ্যৰ ভিন্ন ভিন্ন অঞ্চলত একোটা নিজস্ব স্বতন্ত্ৰ অঞ্চলত বিচৰণ কৰে। মতা হলৌৰে তাৰ জীৱন সংগিনী হিচাপে যি স্ত্ৰী হলৌ বাছি লয় তাৰ লগতেই সমগ্ৰ জীৱন অতিবাহিত কৰে। মাতৃ হলৌ বৰ স্নেহপ্ৰৱণ; সন্তানক সিহঁতে নিজৰ প্ৰাণতকৈ বেছি ভাল পায়।

হলৌ কেতিয়াবা কেতিয়াবা অৰণ্যৰ ভূমি সংলগ্ন অঞ্চলত নামি আহিলেও সিহঁতৰ প্ৰধান বিচৰণ ক্ষেত্ৰ হ'ল ওখ ওখ গছৰ ডাল-পাত, শাখা-প্ৰশাখা আৰু লতাবোৰ। বৰ্ষাৰণ্য হলৌৰ আদৰ্শ বাসস্থান।

হলৌৰ বাসস্থান সংকোচন আৰু ধ্বংস, হলৌৰ বাসস্থানত মানুহৰ স্থায়ী বসতি, চোৰাং চিকাৰ আৰু বিভিন্ন কু-সংস্কাৰৰ ফলত ভাৰতৰ একমাত্ৰ বনমানুহ হলৌ বান্দৰ বৰ্তমান বিপন্ন। এসময়ত আমাৰ ব্ৰহ্মপুত্ৰ নদীৰ দক্ষিণ পাৰৰ প্ৰায় সমগ্ৰ অৰণ্যতেই হলৌৰে বিচৰণ কৰিছিল। কিন্তু বৰ্তমানে অসমৰ মুষ্টিমেয় কেইখনমান অৰণ্যত সিহঁতক বৰ কম সংখ্যাত দেখিবলৈ পোৱা যায়। এসময়ত আমাৰ ডিব্ৰুগড়, তিনিচুকীয়া, যোৰহাট, গোলাঘাট, কাৰ্বিআংলং, গোৱালপাৰা, উত্তৰ কাছাৰ পাৰ্বত্য জিলা ইত্যাদি জিলাৰ প্ৰায় প্ৰত্যেক অৰণ্যতেই হলৌৰে বিচৰণ কৰিছিল। গোৱালপাৰাত ইমানেই হলৌ আছিল যে গোৱালপাৰা চহৰৰ মাজ মজিয়াত এখন পাহাৰৰ নামেই 'হোলোকান্দা পাহাৰ', কিন্তু পূৰ্বৰ হলৌৰে পৰিপূৰ্ণ পাহাৰ হাবি বৰ্তমানে হলৌশূন্য, উন্মুক্ত। শুনিলে বহুতে আচৰিত হ'ব যে ভাৰত চৰকাৰৰ একমাত্ৰ প্ৰাণী সংক্ৰান্তীয় বৈজ্ঞানিক সংগঠন (Zoological Survey of India) ৰ দ্বাৰা প্ৰকাশিত এক তথ্যমতে (Threatened Animals of India) অসমত ১৯৭১-৭২ চনত হলৌ বান্দৰৰ সংখ্যা ৭৮,৭০০। কিন্তু বৰ্তমান অসমত হলৌৰ সংখ্যা ৫,০০০ তকৈ কম। এইটো কি এটা ভয়ংকৰ সংবাদ নহয়নে? মাত্ৰ কিছু বছৰৰ ভিতৰতে আমাৰ অৰণ্যৰ পৰা প্ৰায় ৭৩,৭০০ হলৌ বান্দৰ নাইকিয়া হৈ গৈছে। আমি সন্মিলিত প্ৰচেষ্টাৰে আমাৰ আপুৰুগীয়া হলৌ সংৰক্ষণৰ হকে আন্তৰিকতাৰে কাম কৰিব লাগিব। কোনো কাৰণতেই আমি আমাৰ বাপতিসাহোন হলৌ বান্দৰক অসমৰ পৰা বিলুপ্ত হ'ব দিব নোৱাৰো। আমাৰ মিলিত প্ৰচেষ্টাৰ ফলত হলৌ চিৰস্থায়ী ৰূপে সংৰক্ষিত হ'ব। হলৌ এবিধ লুপ্ত প্ৰায় আপুৰুগীয়া বন্যপ্ৰাণী। ভাৰতীয় বন্যপ্ৰাণী সুৰক্ষা আইনৰ দ্বাৰা (Indian Wildlife Protection Act, 1972) হলৌ কঠোৰ ভাৱে সংৰক্ষিত বন্যপ্ৰাণী তথা ১ নং তালিকাভূক্ত। IUCN (International Union for Conservation of Nature) ৰ অনুসূচী ১ত হলৌৰ নাম অন্তৰ্ভূক্ত হৈছে অৰ্থাৎ ভাৰতীয় বন্যপ্ৰাণী সুৰক্ষা আইনৰ উপৰিও হলৌ আন্তৰ্জাতিক আইনৰ দ্বাৰাই সুৰক্ষিত। হলৌ বান্দৰ আৰু তাৰ বাসস্থানক সুৰক্ষা দিয়াটো প্ৰত্যেকজন নাগৰিকৰ নৈতিক তথা সংবিধানিক কৰ্তব্য। আহক, আমি হলৌ সংৰক্ষণৰ বাবে নিজৰ লগতে আনকো সজাগ কৰিবলৈ আগবাঢ়ি আহোঁ।

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A PRELIMINARY ACCOUNT OF UNITED NATIONS - REDD PROGRAMME

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Introduction: The full form of REDD is Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. It is The UN Collaborative Programme created in September 2008 to assist developing countries to build capacity to reduce emissions and to participate in a future REDD mechanism. REDD has role in conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. UN-REDD Programme was created in response to the UNFCCC (UN Framework Convention on Climate Change, 2007) decision on REDD at COP 13 (Thirteenth Conference of the Parties, 2007) and the Bali Action Plan (Bali Climate Change Conference, 2007). It builds on the convening role and technical expertise of the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP). The UN-REDD Programme supports nationally-led REDD+ processes and promotes the informed and meaningful involvement of all stakeholders, including Indigenous Peoples and other forest-dependent communities, in national and international REDD+ implementation. The Programme also works to build international awareness and consensus about the importance of including REDD+ mechanisms in a future climate change agreement. The UN-REDD Programme is not the only initiative assisting countries that wish to engage in REDD+ activities. Other initiatives include the World Bank's Forest Carbon Partnership Facility, Norway's International Climate and Forest Initiative, the Global Environment Facility, Australia's International Forest Carbon Initiative and the Collaborative Partnership on Forests.

Organization and governance:

The Policy Board of the UN-REDD convenes twice a year to decide on the strategic orientations and budget allocations of the Programme. The composition of the Board is:

Members:
1. One representative per UN agency (FAO, UNDP, UNEP) 2. Nine partner country representatives (from Africa, Asia-Pacific and Latin America and the Caribbean) 3. One Indigenous Peoples representative 4. One representative from a Civil Society organization 5. One representative per donor country, up to three

Observers:
1. Three Indigenous Peoples representatives (from the three regions Africa, Asia & the Pacific, Latin America and the Caribbean), self-selected 2. Three representatives from Civil Society Organizations (from the regions above, plus an NGO from an industrialized country) 3. UNFCCC Secretariat 4. Forest Carbon Partnership Facility represented by the World Bank 5. GEF Secretariat

Ex- officio member: Multi Partner Trusted Fund Office, UNDP

Activities of the global programme:

At the international level, the UN-REDD Programme seeks to build consensus and knowledge about REDD+ and raise awareness about the importance of including a REDD+ mechanism in a post-2012 climate change agreement. It also provides opportunities for dialogue between governments, civil society organizations and technical experts, to ensure that REDD+ efforts are based on science and take into account the views and needs of all stakeholders. The UN-REDD Programme brings together technical teams from around the world to develop common approaches, analyses and guidelines on issues such as measurement, reporting and verification (MRV) of carbon emissions and flows, remote sensing, and greenhouse gas inventories. It provides guidance on how best to design and implement REDD+, to ensure that forests continue to provide multiple benefits for livelihoods and biodiversity to societies while storing carbon at the same time. The Programme is also deeply committed to supporting the engagement of Indigenous Peoples and Civil Society organizations in the design and implementation of REDD+ strategies.

National programmes:

The UN-REDD Programme assists developing countries in preparing and implementing national REDD+ strategies and mechanisms. These efforts help countries develop the capacity to implement REDD+ strategies and become "REDD-readiness"; and provide practical experience and lessons learned that can inform the international dialogue on a post-2012 REDD+ mechanism. The Programme currently has 47 partner countries spanning Africa, Asia-Pacific and Latin America and the Caribbean. Sixteen of these countries are receiving direct support to National Programmes. These 16 countries are: Bolivia, Cambodia, Democratic Republic of the Congo (DRC), Ecuador, Indonesia, Nigeria, Panama, Papua New Guinea, Paraguay, the Philippines, Republic of Congo, Solomon Islands, Sri Lanka, Tanzania, Vietnam and Zambia. A conflict has emerged between Panama´s indigenous peoples and the UN-REDD Programme, which has led to the suspension of activities in the country as of March 2013. To-date, the UNREDD Programme's Policy Board has approved a total of US$67.8 million for National Programmes in these 16 partner countries. These FUNDS help to support the development and implementation of national REDD+ strategies. UN-REDD Programme countries not receiving direct support to national programmes engage with the Programme in a number of ways, including as observers to the Programme's Policy Board, and through participation in regional workshops and knowledge sharing, facilitated by the Programme's interactive online workspace. These countries are: Argentina, Bangladesh, Benin, Bhutan, Cameroon, Central African Republic, Chile, Colombia, Costa Rica, Cote d'Ivoire, Ethiopia, Gabon, Ghana, Guatemala, Guyana, Honduras, Kenya, Lao PDR, Malaysia, Mexico, Mongolia, Morocco, Myanmar, Nepal, Pakistan, Peru, South Sudan, Sudan, Suriname, Tunisia and Uganda.

India and REDD:

India has played an important role in REDD negotiations and has been instrumental in shaping the REDD mechanism by emphasizing the role of conservation and sustainable forest management in mitigating carbon emissions. In international negotiations, India's position on REDD underscores the need for reducing emissions through conservation, sustainable management of forests, and enhancement of forest carbon stocks, in addition to reducing emissions from deforestation and forest degradation. India's stance was accepted at COP-13 in 2007 and incorporated in the Bali Action Plan which guides the current negotiations on REDD. At

the national level, India has a robust policy and legal framework in the form of the Wildlife Protection Act, 1972; Forest Conservation Act, 1980; National Forest Policy, 1988; National Environmental Policy 2006; and Forest Rights Act 2006 for the sustainable management of its forests. India's National Forest Policy, formulated four years before the Earth Summit (UNCED 1992), embodies all elements - social, environment, and economic - of Sustainable Forest Management. The principal aim of India's National Forest Policy is to ensure environmental stability and maintenance of ecological balance, including atmospheric equilibrium, which is vital for the sustenance of all life forms - human, animal, and plant. The derivation of direct economic benefit is subordinate to this principal aim. India's National Forest Policy is in alignment with the four global objectives agreed in 2006 by all member countries of United Nations under the umbrella of United Nations Forum on Forests (UNFF). India has already demonstrated its commitment in climate negotiations by declaring that, even as it pursues its social and economic development objectives, it will not allow its per capita GHG emissions to exceed the average per capita emissions of developed countries. Conservation, expansion, and improvement in the quality of its forests is a national priority for India as it is not only a cost-effective mitigation measure against climate change, but also generates benefits in terms of ensuring qualitative and sustained flow of ecosystem goods and services, vital for the sustenance of local forest dependent communities. A range of policies and programmes have been initiated at the national level to address the impacts of climate change in the context of sustainable development. The National Mission for a Green India (GIM) is one of eight Missions prepared under the aegis of the National Action Plan on Climate Change (NAPCC). Its objective is to increase forest cover by over five million ha and improve the quality of forests over another five million ha during the next ten years; enhance annual CO2 sequestration by 50 to 60 million tones by the year 2020; and increase forest based livelihood income of about three million households living in and around the forest. The National Afforestation Programme (NAP) aims to restore degraded forests with active participation of local communities. For further strengthening, this programme has been reviewed by the Government of India based on feedback from implementing States and other stakeholders (GoI 2011). The MoEF is implementing a centrally sponsored scheme, namely "Intensification of Forest Management Scheme", which aims at the creation of infrastructure for the development, protection, and conservation of forest resources in the country. For India, carbon services from forests and plantations are one of the co-benefits and not the primary objective of forest management. Therefore, as India is poised to pilot REDD+ projects in the country, it is important to revisit the related environmental & economic issues underpinning the design of an appropriate national architecture.

REDD 2015-1020:

When the UN-REDD Programme was established in 2008 there was a high level of expectation that a global climate regime would be developed under the UN Framework Convention on Climate Change (UNFCCC) at COP15 in Copenhagen in 2009. Although a comprehensive global regime did not emerge, slow and steady progress has been made on REDD+ in the years since. Of particular note is the most recent decision taken at COP19 in 2013 to establish an agreed upon international system for "results-based actions" leading to "results-based payments" for REDD+. The "Warsaw Framework" for REDD+, as it has come to be referred to, is a significant milestone in the evolution of REDD+. It establishes a "rulebook" for how countries will ensure REDD+ results are measured, reported and verified, including setting clear baselines for determining those results that can receive results-based payments. Additional work will be done on safeguards at the upcoming Lima COP. Given the impending expiration of the MOU between the three agencies, the strategic importance of the Warsaw Framework, the gathering of lessons-learned through the external evaluation, as well as the overarching evolution of REDD+; it is an auspicious time to embark on the development of the UN-REDD Programme Strategy for the next five year period - 2016-2020. The UN-REDD Programme Strategy for 2016 - 2020 must be able to capitalize on the strategic opportunities presented by the Warsaw Framework, the United Nations Secretary-General's Climate Summit in September of 2014, and the UNFCCC Conferences of the Parties (COP) in Lima in 2014 and Paris in 2015. Furthermore, a credible strategy must be designed through a robust and inclusive consultative process. This process should engage not only the stakeholders who are currently represented on the UN-REDD Programme Policy Board (PB), but the broader REDD+ stakeholder community as well.

Conclusion:

The UN-REDD Programme has a unique opportunity to benefit from the current global momentum on forests and to and to strengthen its role as a key partner to support climate change mitigation from developing countries through the implementation of REDD+. As such, the three UN Agencies that established the UN-REDD Programme intend to propose a strategy for the next five year period (2016-2020) that will take full advantage of this opportunity and apply the important lessons that have been learned over the first seven years of the Programme's existence.

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BIO-INDICATORS

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Growing social concern about environmental quality could be observed in recent years, both on a global and local scale. This is connected with more and more convincing evidence that environmental pollution results in degradation of particular ecosystems. Emission of harmful substances has negative effects on the natural environment, human health and agricultural production efficiency. When the consequences of environmental pollution become visible, it is often too late to prevent them. Chronic toxic effects, impossible to notice at the initial stage of process, may manifest themselves after many years. Bioindication is a research activity allowing us to obtain a picture of the ecological situation on the basis of its important element. Bio indicators are biological indicators of environmental quality, characterising environmental conditions. Their tolerance is usually limited, so their presence or absence, and health state enable determine some physical and chemical components of the environment without complicated measurements and laboratory analyses. Bio indicators may be divided into those responding to environmental changes in a visible way (morphological and physiological changes)and those whose reactions are invisible, but which cumulate different substances (pollutants) whose concentrations may be determined. According to another division, qualitative and quantitative bio indicators can be distinguished. The former indicate the fact that a given species occurs in a given ecosystem, the latter allow to determine the number/concentration of representatives of a given species in a given ecosystem.

Plants as bio indicators : Plant organisms play an important role in their natural habitats - they supply oxygen, control organic substance circulation and biological balance of the soil and bottom deposits, provide food and shelter to other organisms. Phyto indicators are more and more frequently used for ecosystem quality assessment due to their sensitivity to chemical changes in environmental composition and the fact they accumulate pollutants. The use of plants as bio indicators has many advantages, including low costs, the possibility of long-term sampling and high availability. Their disadvantage is the necessity to take into account the physical conditions, impact of environment properties and genotype diversity in a given population. Lower plant organisms (grasses, mosses, lichens, fungi and algae) are used most often in analyses of atmospheric depositions, soil quality and water purity. Responses of trees and shrubs to the presence of pollutants are also observed. The assimilatory organs of trees,

especially coniferous ones (pine, fig etc.) are characterised by the capacity to accumulate air pollutants, which makes them suitable for the determination of residues of pesticides. Numerous and visible changes, like needle loss, crown thinning, changed bark colour increased needle fragility, enable us to estimate the level of environmental pollution.

Mosses and lichens are applied as indicators of environmental pollution due to their capacity to accumulate and store heavy metals and other toxins. Typical examples of a biological indicator of air pollution are lichens. Their major advantage is response repeatability in various habitats. Regardless of the investigation site and differences in the species composition, destruction zones are easy to distinguish. Due to their specific anatomic, morphological and physiological characters, lichens are among the organisms that die first as a result of excessive air pollution. Common application of pesticides, especially herbicides, and their adverse effects on the natural environment contributed to fast development of bio analytical methods based on plant material. Algae (green, blue-green, and diatoms), duckweed, aquatic and terrestrial macrophytes are frequently used in toxicity tests.

Due to wide variety of chemical compounds, the problem of toxicity of polluting substances is difficult to define. However, appropriate interpretation of research results and environmental changes allow us to assess environmental pollution by xenobiotics and their degradation products. Environmental pollution constitute a serious threat, so biomonitoring methods should be constantly improved, to enable prediction and control of potential environmental hazards. Nowadays it is a well-known fact that each ecosystem component can provide valuable information about degradation of the natural environment and dangers to human and animal health resulting from it. Beyond a doubt, acquiring knowledge about ecological tolerance and its application to practice can be of benefit to us all.

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THINK GREEN: EDUCATION AND ENVIRONMENTAL AWARENESS

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Environment means the surrounding external conditions influencing development or growth of people, animal or plants; living or working conditions etc. Awareness in the field of environment is becoming a global talk. People worldwide are realizing its importance as they are able to smell a polluted tomorrow. Careful handling of today's environment would only serve as a legacy for tomorrow's generation. Hence, we need to be judicious in exploiting our resources optimally. To ensure a sustainable development we need to know something about how our environment works. Environment can be defined as the set of conditions that surround an organism or the complex of socio cultural condition that affect an individual. The environment is a hot topic across the world and much has been said about the need and action to protect our planet.

ENVIRONMENT STUDIES : IMPORTANCE

The environment studies enlighten us, about the Importance of protection and conservation of our indiscriminate release of pollution into the environment. At present a great number of environment issues, have grown in size and complexity day by day, threatening the survival of mankind on earth. We study about these issues besides and effective suggestions in the Environment Studies. Environment studies have become significant for the following reasons :

1. Environment Issues Being of International Importance

It has been well recognised that environment issues like global warming and ozone depletion, acid rain, marine pollution and biodiversity are not merely national issues but are global issues and hence must be tackled with international efforts and cooperation.

2. Explosively Increase in Pollution

World census reflects that one in every seven persons in this planted lives in India. Evidently with 16 per cent of the world's population and only 2.4 per cent of its land area, there is a heavy pressure on the natural resources including land. Agricultural experts have recognized soils health problems like deficiency of micronutrients and organic matter, soil salinity and damage of soil structure.

3. Need for An Alternative Solution

It is essential, specially for developing countries to find alternative paths to an alternative goal. We need a goal as under :

(1) A goal, which ultimately is the true goal of development an environmentally sound and sustainable development.
(2) A goal common to all citizens of our earth.
(3) A goal distant from the developing world in the manner it is from the over-consuming wasteful societies of the "developed" world.

4. Need to Save Humanity from Extinction

It is incumbent upon us to save the humanity from exinction. Consequent to our activities constricting the environment and depleting the biosphere, in the name of development.

5. Need for Wise Planning of Development

Our survival and sustenance depend. Resources withdraw, processing and use of the product have all to by synchronised with the ecological cycles in any plan of development our actions should be planned ecologically for the sustenance of the environment and development.

Education plays a crucial role in raising awareness of environmental challenges and shaping the attitudes and behaviours that can make a difference. Recently it is found that the role of education in both preparing and providing our citizens with the skills needed for a sustainable and productive future. Many classrooms already discuss important issues like recycling or sustainable consumption. Better science education in general can thus combine with specialised courses in order to increase student proficiency in environmental issues.

The need for green skills extends beyond basic education. Vocational education programmes are important in preparing students to flexible and adaptable to changing standards and requirements. For basic education as well as vocational education and training, policy measures such as work-based learning and the provisions of better career guidance can be powerful tools to strengthen the link between skills development and the green growth agendas.

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PLASTIC BAGS ------ LITTLE MORE TO THINK

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"PLASTIC"- the simple word remind us about the beautifully coloured, exceptionally useful and incredibly durable, most amazing invention of scientific world that very efficiently dominated every aspects of our life. In present times where ever we look, there is a very chance that we are looking at plastics; a day without seeing plastic is out of imagination. When it was invented, it was assumed as the most wounderful blessing for mankind. Times roles on and simultaneously its brilliant image was comes under questioning graze. And in present age, it seems like an unavoidable problem, like the blessing itself strikes back. Now, it is a million dollar question how to reduce its invasion and clear out the previous dependence on it. Its most praised quality was proved to be its biggest drawback, i.e. its durability. Plastics are practically non degradable because it takes hundreds and thousands of years to simply change into other simpler compounds. Thus it causes a severe problem in environmental degradation and pollution of all kinds.

The most commonly used plastic product of present world that can be lashed to vast extent is plastic bags. Plastic bags are a great necessity of modern day world but also its castoffs cause a real threat to environmental conditions. It is very truly said that where man can't reach, plastic bags can. Even the most remote islands and sea depths have witnessed the plastic bags.

Some facts regarding plastic bags ..

1. Over 1 trillion plastic bags are used every year, worldwide. A plastic bag needs more then 1000 years to degrade completely.
2. When plastic break down, it doesn't biodegrade but it photo-degrade. That means break down to smaller toxic fragments which cause further contamination.
3. High density polythene takes much lesser time to degrade than single use takeout plastic bags.
4. Ban on plastic bags is an emotional response which fails to strike at the heart of the real issue. Because dependence on plastic is irreversible.

5. Some countries, for example, Ireland (2001), implemented plastic tax on single time use plastic bags and items which cause 93.5% drop on plastic bags use but apparently increased around 200% more use of plastic packed foods and goods, keeping the problem intake.

Plastic bags vs. paper bags ..

Whenever the question arises about the alternatives of plastic bags, the most frequently found answer is paper bags and Styrofoam boxes. Does paper or Styrofoam is really an answer to this problem? It seems as if it is tried to avoid the actual problem and blame only the plastic bags.

1. A study on the life cycle of three types of disposable bags (i.e. plastic, paper and compostable plastic bags) showed that both paper and compostable plastic needs more raw materials, more energy and fuel in the manufacturing process.
2. Paper bags add more municipal waste than plastic and its recycle cost is seven times greater than plastic.
3. Paper comes from the cost of trees that cause massive habitat destruction and vast ecological damage, i.e. harmful in more than one ways.
4. Biodegradable plastic (bioplastics) are made up of PHA (polyhydroxy alkanoate) and PLA (poly lactide) are made from food sources that cause agro economical conflicts.
5. Globally in each year plastic create 9.1 cubic pound solid wastes vs. 45.8 cubic pounds in paper and plastic cause 1.8 cubic pound water borne wastes vs. 31.2 in case of paper.
6. Styrofoam is also not completely biodegradable, it release gases during breakdown that cause depletion of ozone layer and cause land and water pollution.

Real facts from India ..

Like many other countries, India also trying to cope up with the plastic bag problem from decades now. Laws and slogans are made and prohibition and restrictions are announced from time to time.

1. Mumbai, Delhi and Kerala, 2003 - Law introduced to prohibit plastic thinner than 20 μ. With the vision to discourage the production and use of thinner plastic bags and thereby decrease the use of plastic bags, because thicker plastic bags are expensive.
2. Northern India, 2005 - Laws that stated use and production of plastic bags cause fine of Rs. 500-5,000 or imprisonment.
3. India, 2007 - Public campaigning against use of plastic bags and appreciates use of paper bags and old news papers.
4. India, 2014 - plastic bags are still used in its full glory all over the country.

Apparent solutions ..

As because it is found that use of paper bags are not the solution to the problem and stopping use of plastic bags is out of question, thus some other probable solutions may be appreciated.

1. Inclination towards the use of multi-usable plastic bags and gives up on the use and toss mentality. Because all plastic bags are multi-usable.
2. Neither plastic nor paper bags are best choices but use of reusable canvas bags are a good choice.
3. *Solution is not* -
   a) Ban of plastic bags.
   b) Switching to paper or compostable or bioplastic bags.

   Solution is in -
   a) Discourage free distribution of plastic bags.
   b) Implementation of tax and higher cost in manufacturing of plastic bags.
   c) Each reusable plastic bags can eliminate hundreds of single use plastic bags.
   d) Cultural shift away from use and toss mentality.
   e) Maximum recycle of plastic bags and least throw to the garbage bins.

ASSOCIATION BETWEEN HAEMOGLOBIN E AND TROPICAL/ SUB-TROPICAL CLIMATE

Dr. Bhaskar Das
Department of Anthropology

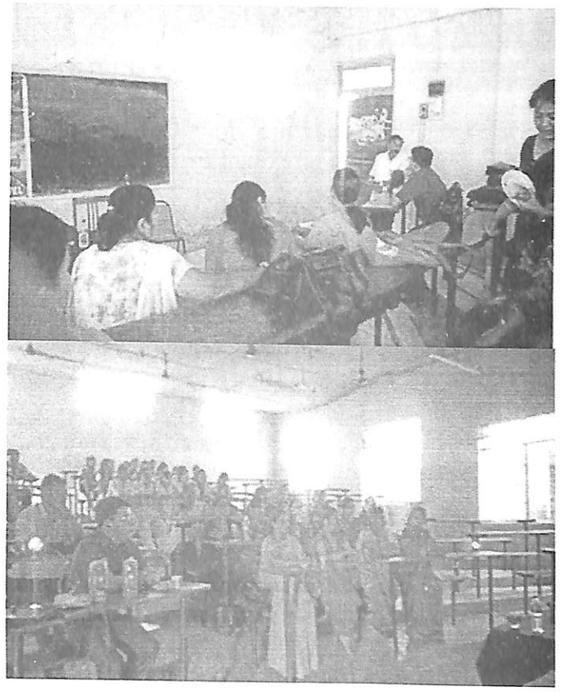
Haemoglobin E (HbE) [codon 26 GAG→AAG] is the most frequent haemoglobin variant in South East Asia. It gives rise to functional but unstable haemoglobin and activates a cryptic splice site causing mild to moderate anaemia. In India, frequency of this haemoglobin variant is mainly concentrated in North East India whereas the gene is sporadically present elsewhere. The high frequency is probably due to the presence of malarial selection pressure. It is reported that HbE carriers enjoy some protection against *P.falciparum* malaria and this conjecture is supported by both epidemiological and experimental studies. HbE is high in areas where the climate is mostly tropical. It is pertinent to note that malaria spreads through the tropical and sub-tropical regions which are good breeding regions of the *Anopheles mosquito*, the carrier of malaria. High prevalence of HbE is reported in several population groups of Assam. The state of Assam witnessed a very high prevalence of malaria until the malaria eradication programmes which started after 1950s. The HbE polymorphism therefore may have evolved by carrier advantage in a malarial environment. There are reports that *P.falciparum*, the killer parasite is still prevalent in Assam and presence of asymptomatic carriers of the parasite and *Anopheles minimus*, the major vector, support the perennial transmission of malaria.

Hence, it is probable that tropical/sub-tropical climate with the presence of *P.falciparum* including its various strains and population endogamy are perhaps responsible for the high prevalence of HbE in North East India.

IMPORTANT PROGRAMMES of the SOFEC

1. World Environment Day observed by the SOFEC on 5th june, 2014 at Gallery-4 in DHSK College:

On this occasion a talk was delivered by the invited speaker, Dr. R. Sarmah, HOD, Dept. of Botany, DHSK College on the topic: "HOW LONG WE MAY SURVIVE IN THIS UNIVERSE". The talk was completed by a small documentary film on Jadav Payeng: "The Forest Man of India". The programme ended by plantation of tree sapling by the invitee..



A view of the lecture delivered by the Invited Speaker and Audience on World Environment Day, 2014

From L to R : Dr. R. Sarmah (Invited speaker), Dr. R. Konwar (Ex- Principal) and Mrs. Kalpana Sengupta Barua (President of the SOFEC) on World Environment Day, 2014

Plantation of Tree Sapling by the Invited Speaker Dr. R. Sarmah, HOD, Dept. of Botany, D.H.S.K. College on W.E.D. 2014

2. 12th Foundation Day of THE SOFEC was organised on 12th August, 2014 at Srimanta Sankardev Sabhakakshya with a talk delivered by Rajib Rudra Tariang Asst Prof, Dept. of Zoology, Digboi College on "ISSUES ON BIODIVERSITY AND ON SNAKE IDENTIFICATION, ITS CONSERVATION, IMPORTANCE AND FIRST AID MEASURES IF BITEN BY ANY SNAKES"

Rajib Rudra Tariang (Invited Speaker) on 12th Foundation Day of the SOFEC, 12th August, 2014

3. An Extempore Speech Competition related to environmental issues was held on 11th February, 2015 by the SOFEC, at Srimanta Sankardev Sabhakakshya, D.H.S.K. College

Looking through the LENS

Some of the Glorious Moment of the SOFEC

Felicitation to our Principal Dr. A. Ahmed by the President of the SOFEC, Mrs. K. S. Baruah

Dr. A. Ahmed, Principal, DHSK College

Dr. B. Dutta (Advisor of the SOFEC)

Dr. P. Ganguli, IQAC Co-ordinator

Audience on 12th Foundation Day of the SOFEC

President of the SOFEC & Our Judges (Extempore Speech Competition) 11th Feb. 2015

Prof. Tikendrajit Gogoi, Dept. of Zoology, Prize Distribution, Extempore Speech Competition, 11th Feb. 2015

Pioneers in the Inception of SOFEC- a brief information from the past records

SOFEC is formed by the effort of certain groups of like minded Teachers of DHSK College whose initiatives requires a sense of gratitude. The name of the Founder Members of the SOFEC is given below:-

A meeting was held on 12th August, 2002 for the formation of an organization on "Environmental Awareness and Conservation "and a resolution was taken that there shall be a committee of the following posts:-

ADVISOR:
1. Dr. S. K.Dutta (Principal DHSK College)
2. Mrs. A. Barua (Vice Principal)
3. Mrs. S. Khatun Khanikar (Dept. of Zoology)
4. D. Baruah (Dept. of Physics)
5. K. M. Rabha (HOD, Dept. of Anthropology)

PRESIDENT:
Dr. Santanu Sengupta (Dept of Pol.sc)

VICE- PRESIDENT:
1. Subarna Bhuyan (Dept. of Botany)
2. Dr. Bharati Dutta (Dept. of Geography)

SECRETARY:
Moromi Talukdar (Dept. of Anthropology)

ASST. SECRETARY:
1. A. J. Bharali (Dept. of Anthropology)
2. U. Bathari (Dept. of History)

TREASURER:
L. Doungel (Dept. of Pol. Sci.)

EXECUTIVE MEMBERS:
1. K. Sengupta Baruah (Dept. of Hindi)
2. S. Das Bordoloi (Dept. of Zoology)
3. Dr. S. Sarmah (Dept. of Chemistry)
4. T. Gogoi (Dept. of Zoology)
5. M. Chaliha (Dept. of Geography)
6. R.L. Borah (Dept. of Botany)
7. D. R. Boro (Dept. of Anthropology)
8. Dr. J. P. Phukan (Dept. of Physics)

SOFEC IN THE NEWS

8, THE ASSAM TRIBUNE, DIBRUGARH — SATURDAY, JUNE 7, 2014

World Environment Day Observed across Dibrugarh Dist.

STAFF CORRESPONDENT

DIBRUGARH, June 6 – In keeping with the World Environment Day on Thursday, several events were organised in different parts of the district here to create general awareness on the importance of preserving nature and environment among the children in particular and the people in general.

A quiz competition on environmental issues was organised at the district library here where about 165 teams from different schools participated. Salt Brook School bagged the first prize, Moran College grabbed the second prize while Vivekananda Kendra Vidyalaya stood third in the quiz competition. District Election Officer, Biswajit Phukan, was the quiz master. The local DC was present on the occasion.

As part of the global environment protection campaign, a talk on 'how long we may survive' was organised under the aegis of the Society for Environment Conservation of DHSK College in the auditorium of the college. Rituparna Sharma, HoD, Botany department, spoke at length on regional variation in biodiversity and its importance. He also emphasised on human actions that caused peril to the diversity. The programme was presided over by Kalpana Sengupta Baruah, the president of the society of the college.

Dr Rajee Konwarh, the principal and Dr A Ahmed, the vice principal of the college also delivered short speeches on the day's theme. Sunanda Sahu, secretary of the society and faculty of the Anthropolgy department of the college, spoke on the significance of the World Environment Day and on its genesis. A short documentary film on Jadav Payeng, the Forest Man of India was also screened for the students and teachers of the college during the event.

You can't change the past but you can change the future, It's Upon you what you Want!

Nature, A Biennial Multilingual Newsletter of the SOFEC, DHSK College, Dibrugarh
Published by Mrs. Sunanda Sahu, Secretary on behalf of SOFEC, DHSK College, Dibrugarh and Printed by Bhagat Printers, Dibrugarh-786001