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NESAs

NATIONAL ENVIRONMENTAL SCIENCE ACADEMY

Vol. 20 Issue - 05 (MONTHLY)

May 2017

Report of National Conference on Biotechnology & Environment

10-11 April, 2017

Dr. MA Ansari Auditorium, Jamia Millia Islamia, New Delhi



National Conference on "Biotechnology and Environment" at the Dr. M.A. Ansari University Auditorium, Jamia Millia Islamia, New Delhi on April 10-11, 2017.

The National Environmental Science Academy, and Department of Biotechnology, Jamia Millia Islamia, New Delhi jointly organised a

Biotechnology is the use of living systems and organisms to develop or make products, or "any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use" (UN Convention on Biological Diversity, Art. Depending on the tools and applications, it often overlaps with the (related) fields of bioengineering, biomedical engineering, bio manufacturing, molecular engineering, etc. For thousands of years, humankind has used biotechnology in agriculture, food production, and medicine. In the late 20th and early 21st

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NESAs AWARDS 2017

APPLICATIONS ARE INVITED

Last Date 31, July 2017

FELLOWSHIP AWARD

FELLOWSHIP is the highest award conferred given by this Academy. The recipients shall get Citation, Certificate, Memento and a Gold plated medal. Awardees can suffix F.N.E.S.A. after their names.

BEST SCIENTIST AWARD

The awardee shall get Citation, Certificate, Memento and a Gold plated medal.

EMINENT SCIENTIST OF THE YEAR

The awardee shall get Citation, Certificate, Memento and a Gold plated medal.

SCIENTIST OF THE YEAR AWARD

The awardee shall get Citation, Certificate, Memento and a Gold plated medal.

ENVIRONMENTALIST OF THE YEAR AWARD

The awardee shall get Citation, Certificate, Memento and a Gold plated medal.

JR. SCIENTIST OF THE YEAR AWARD

The applicant must be below 35 years of age by December 2017. The awardee shall get Citation, Certificate, Memento and a Gold plated medal.

PRESCRIBED APPLICATION FORMS

Separate application form should be used for each award.

The forms are non transferable, and can be downloaded from the NESAs website (www.nesa-india.org) and depositing a bank draft for Rs. 1000-00/\$40 only (per form), drawn in favour of **NATIONAL ENVIRONMENTAL SCIENCE ACADEMY** payable at **NEW DELHI**, and sent to the address given below:

THE GENERAL SECRETARY-NESAs

NATIONAL ENVIRONMENTAL SCIENCE ACADEMY (NESAs)

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centuries, biotechnology has expanded to include new and diverse sciences such as genomics, recombinant gene techniques, applied immunology, and development of pharmaceutical therapies and diagnostic tests.

In the present circumstances, the threats being faced by the environment, biodiversity, agriculture and health needs socially implementable research in order to provide good quality of air, water and food for all. This would also include a battle with pollution and disease. The four major themes on plant, animal, medical and environmental biotechnology was meant to address food, health and environmental society to the population as well as the society.



The conference started with the recitation of Holy Quran and its translation. After that the HoD (Department of Biotechnology, JMI), Prof. Mohammad Husain

welcomed the Chief Guest, Guest of Honor, delegates and participants. The Organizing Secretary Dr. M. Irfan Qureshi delivered the introductory speech on the conference and its themes.

The presidential speech was delivered by the Dean, Faculty of Natural Sciences, Prof. Sharif Ahmad. The President, of NESAs, Prof. Javed Ahmad, apprised the participants of various activities under taken by the Academy, especially with regard to science and environment. A video message from Prof. M.S. Swaminathan was also played who cited the alarming condition of environment and warned to take quick steps for adoption of policies leading to sustainable development.



The keynote address was delivered by the Chief Guest, Dr. Shaid Jameel on the topic "From Chemistry to Virology - Lesson from Career in Science." The second keynote address was given by the guest of

honour, Dr. S.P.S. Khanuja on "Breaking Traditional Boundaries of Agriculture: The Way Forward for Secondary Agriculture Driven Entrepreneurship."

The Distinguished Biotechnology Award was conferred upon Prof. Arif Ali, former Head of the Department of Biotechnology, Jamia Millia Islamia, New Delhi. He has been teaching advance subjects such as molecular genetics at UG and M.Sc., level, and also supervised Ph.D. research of more than 40 scholars. He did post-doctoral research on molecular genetics (1991-94) in the state University of New York, Buffalo, and the University of Wisconsin-Madison. He also completed a certificate course on Intellectual Property rights (2004) from World Intellectual Property Organization (WIPO) Geneva, Switzerland.

The conference comprised of 21 plenary lectures, 69 oral presentations, 160 poster presentations. 05 Young Scientist Awards were also given away to Young Biotechnologists in field of Plant, Animal, Medical, Environment and Innovative Biotechnology. Other than this, First, Second and Third Prizes were also given to winners from each categories of Biotechnology. A number of papers on malaria parasite, drug resistance in bacteria, cytochrome, remediation, sustainable environment, intellectual property rights, plant biotechnology, etc. were presented in the conference. Various esteemed scientists from CCMB (Hyderabad), CDRI (Lucknow), JNU (New Delhi), AMU (Aligarh), IGNOU (New Delhi), IGB (New Delhi), NIPGR (New Delhi), JMI, DU, etc. from across the Nation took part in discussions and made their own presentations.



The conference was supported by SERB-DST, ICMR, CSIR and Agrisera (Plant Antibodies) and the Oil and Natural Gas Commission (Vasant Kunj), New Delhi. ONGC is currently involved in

conservation and protection of Eastern Swamp Deer (Barasingha), a rare and diminishing species in the country, as part of its corporate social responsibility (CSR) initiative they tried to propagate this effort through advertisement in the conference souvenir.

The conference participants were greeted with conference kits, high quality food and teas and cultural programs. Cultural



programs were performed by Mr. Zeeshan Zameer (Ghazals), RJ Naved (Radio Mirchi) and The Mad Artists (Rock Band). Jamia Millia Islamia was at its best in terms of hospitality with integrated coordination from each department and around 100 volunteers from

Department of Biotechnology.

Valedictory function was held on Day 2; 11th April 2017 at 5:30 p.m. Prof. M. Iqbal was the Chief Guest and delivered valedictory speech. Prof. M. Anis (AMU), Prof. Nafees A. Khan (AMU) and Prof. R.K. Singh HoD, Toxicology, CDRI, Lucknow also attended the valedictory function. Prize distribution was also done to the best presentations. The recommendations will be sent later on.

Improved Health, Food and Air for all were the main recommendations of the Conference. Health related issues were also discussed during the deliberation of the conference. Conference was ended with vote of thanks with a motto of Green Energy and Clean Energy.

The Good, Bad and the Ugly: Monumental Conservation Challenges in the Af-Pak Region

S. K. Basu

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Afghanistan and Pakistan (Af-Pak) constitute a region that is globally known to be most vulnerable to insurgency, terror attacks, volatile socio-political conditions and economic destabilization. However, these two nations also constitute a region that has spectacular natural beauty, monumental snow clad mountain ranges, virgin forests, majestic wildlife and significant biodiversity. Several parts of the Af-Pak region has very poor modern infrastructure; and hence has been cut off from the encroaching anthropogenic pressures for centuries. However due to the extremely fragile socio-economic as well as socio-political situation of the region any attempts for successful conservation of local forests, wildlife as well as biodiversity has been a significant challenge for decades. Afghanistan particularly has been extremely vulnerable and served as the battleground of several small and big local and regional wars that has devastated its economy, infrastructure, quality of life and off course the helpless wildlife and vulnerable ecosystems across the nation. Pakistan is also not far behind with deplorable conditions of her divergent but fragile ecosystems from the northern mountainous region to the riverine plains and the deserts; and to the Arabian Sea washing her southern shores.

Furthermore, recent initiatives for developing strategic infrastructural development like the highly controversial China-Pakistan Economic

Corridor (CPEC) connecting landlocked western China to the Indian Ocean via few of the most fragile and delicate ecosystems running across Pakistan will be highly detrimental towards the eco-environmental stability of the nation. Complete eradication of unaccounted hectares of precious forests and ecosystems in her vulnerable northern regions for building bridges, motorable roads and highways has the high risk of damaging some of the most outstanding local ecosystems standing across the proposed route for CPEC. Pakistan has been almost economically bankrupt and the nation has almost very little or no Foreign Direct Investments for overhauling its infrastructure. As a consequence, the nation has been too dependent on

the potential economic prosperity of CPEC undermining the ecological costs. To the best of our knowledge no comprehensive Environmental Impact Assessment (EIA) studies are being conducted or are planned for the future; and the consequence could be devastating for the future of Pakistan.

Pakistan is also notorious and the only nation to have legalized hunting in south Asia making her wildlife vulnerable to serious anthropogenic over exploitations for revenue generation. Every year, rich Gulf elites are provided formal hunting licenses that have caused the death of thousands of endangered bird species like Houbara bustards and other vulnerable wildlife in some of the most fragile natural ecosystems of the nation. Without any attempts for sustainable harvest of the local wildlife species, no formal surveys to understand population dynamics of the target species; indiscriminate hunting licenses are released each year giving death sentences to many of the nation's spectacular wildlife just for the exchange of few dollars. Last but not the

least, the pressure of real estate development, unplanned over exploitation of the natural ecosystems for short term gains, monumental corruption, lack of any modern conservation infrastructure, funding, trained personnel and huge security issues is



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transforming Pakistan into a death zones for most of its majestic natural ecosystems across the nation. The worst impacted areas are the northern mountainous areas, fragile ecosystems of Sindh, Baluchistan, Punjab and Khyber-Paktunkhawa (KPK) that are included in the proposed CPEC route.

Even worse is the situation of the Federally Administered Tribal Area (FATA) and the region along the Af-Pak border that is home to one of the highest rates of insurgency impacted areas on the planet.

Due to complete absence of any rule and administration on either side of the highly porous border along the Durand Line separating Afghanistan and Pakistan; this is the most severely impacted region for Baluchistan and KPK on the Pakistan side and the adjoining districts of Afghanistan. This Duran



Line region is the flash point of the Af-Pak region and unfortunately hosts few of the most spectacular natural ecological habitats at the cross roads of rapidly increasing hot bed of various forms of insurgency and militant activities, failing administration, poor governance, unimaginable corruption, socio-economic and socio-political destabilization, radicalization, military interventions and very little value and respect for human life and property. As a consequence, the people on either side of the border are extremely poor, marginalized, isolated and extremely vulnerable. They are heavily dependent on the fragile local forests for their daily sustenance putting severe anthropogenic footprints into the vulnerable local ecosystems that are approaching a silent death making this region even more vulnerable to destruction in the not so distant future.



Unbelievable but true is the fact that in spite such negative ground realities, some of the local natural ecosystems in the Af-Pak region; mostly in the highly inaccessible mountainous parts of central and northern Afghanistan as well as

northern and western Pakistan has thrived due to very little or no anthropogenic influence or intervention. Highly endangered species such as snow leopard has been reported fairly recently to increase their wild populations in the Af-Pak region; mostly in the sparsely populated and mostly inaccessible mountainous areas of war torn Afghanistan. Although Pakistan claims to have cheetah as one of her wildlife in their government website; however, no credible or scientifically acceptable observation has been made for this majestic mammal even in the extreme western areas of the deserts of Baluchistan adjoining Iran in the past six decades. Species like the Indus dolphin is counting their last numbers just a little further from extinction; while several other species getting extinct reported/unreported into oblivion due to lack of any initiative or attempt for conserving the majestic wildlife and forests of the Af-Pak region.

To,

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From

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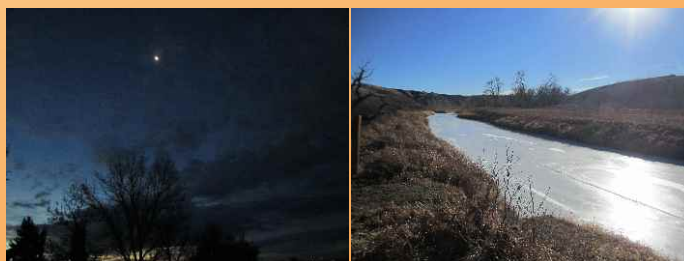
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INTERNATIONAL JOURNAL ON AGRICULTURAL SCIENCES - NAAS RATING 2.60
INTERNATIONAL JOURNAL ON ENVIRONMENTAL SCIENCES - NAAS RATING 3.06
INTERNATIONAL JOURNAL ON BIOLOGICAL SCIENCES - NAAS RATING 3.14
INDIAN JOURNAL OF UNANI MEDICINE - ISSN NO. 0976-4526

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The level of human life quality being extremely poor in the region, it is better not to say anything with respect to the environmental pollution in the Af-Pak region; which is slowly turning from bad to worse with every passing day. Security being one of the most pressing issues in the Af-Pak region credible international aid for conservation practices, surveys, surveillance and monitoring and eco-environmental management is being severely disrupted. Overall, it can be concluded that unless any credible measures are adopted very soon with long term perspective the Af-Pak region with its negative politics of the good, bad and the ugly is moving down the hill with no breaks to stop it from complete natural destruction in the future.

Photo credit: S. K. Basu