

A close-up photograph of an elephant's head and trunk. The elephant is dark grey with wrinkled skin. Its trunk is thick and covered in fine hairs, extending downwards. Two large, curved tusks are visible on the right side of its head. The background is a blurred green forest. The text 'BALIPARA FOUNDATION' is written in green at the top, with a small red dot above the 'i' in 'BALIPARA'. Below it, 'Assam • India' is written in white.

BALIPARA FOUNDATION

Assam • India

2016

This book was specially compiled to capture the spirit of Balipara Foundation through its two events – 'Elephant Talk Conference 15 & Balipara Foundation Awards 15

Designed and compiled by Balipara Foundation.

ACKNOWLEDGEMENTS

To the Asian Elephants for their magnificence

To the Balipara Foundation 15 Awardees for their inspiration

To the Award Presenters for their humbleness

To the Government of Assam & Meghalaya for their unequivocal support.

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To Gunter Pauli for his disruptive ideas

To the following sponsors for believing & investing in our ideas:

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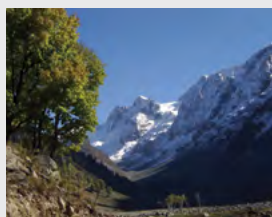
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PREAMBLE

On the 5th & 6th of November 2015, we concluded the 3rd Edition of our Annual two day Conservation Event in Guwahati, Assam. These events were conceptualized around two distinctive varieties of mammals. The first is the largest of its type and the second the most intelligent. The first threatened and the second thriving. Both emotional and social creatures. Elephant & Man.

While the Elephant Talk Conference, as the title suggests, revolved around identifying the right ideas towards conservation, The Balipara Foundation Environmental Awards, sought to inspire by the telling of stories of our compassion, creativity & capacities that enable us to seek the lofty ideals of conservation.

We are certain that these small steps we have taken will lead us to the big ideas that we can see lies ahead. We see a future where these ideas will make conservation a creative process towards the expression of the unique human qualities that makes it possible for us to think, in the first place, that we can actually make a difference.

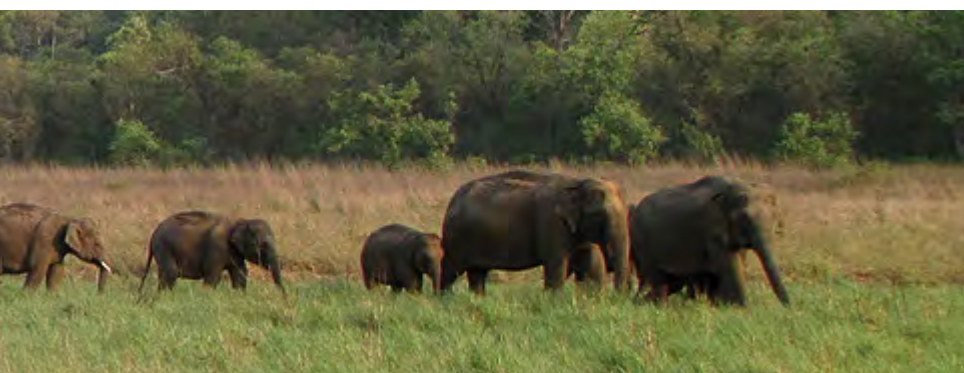
Elephant Talk 2015: Creating Drivers for Conservation


Delving upon the topics of corridor-connectivity, conflict resolution & long-term planning, Elephant Talk 15 created a platform for Governmental & Non-Governmental Agencies to get together and build consensus on Joint Long-term Planning. Participated by State Governments

from 6 North Eastern States, the Government of Bhutan and more than 30 NGOs from India, Myanmar, USA, UK & Thailand, the forum discussed ways and avenues for a collaborative approach. Dynamic mentorship came from WWF-India Secretariat, WTI, WCS-India Program and support from many other Organizations.


Balipara Foundation Awards 2015: Saluting Environmental Crusaders from The Eastern Himalayas”.

The Awards brought together some of the brightest and inspiring minds in biodiversity conservation and environmental Think-tanks to deliberate and come up with actionable solutions to restore the fractured biodiversity of the region. One of the primary objective of the Awards is to bring into focus grassroots conservation case studies and real life champions of the Eastern Himalayan Region. Since the inaugural Awards in 2013, Balipara Foundation Awards has been saluting and recognizing outstanding efforts towards biodiversity conservation and restoration in the Eastern Himalayan Region.





The Balipara Tract & Frontier Foundation is based out of the Assam, India and is strategically located within the Eastern Himalayan Biodiversity Hot-spot. Established in 2007, the Foundation has promoted its concept of Naturenomics™ to organizations, industries and governments across the world. The Foundation has been the front-runner in strategizing an alternative developmental model for the North-Eastern Region of India.



OUR VISION

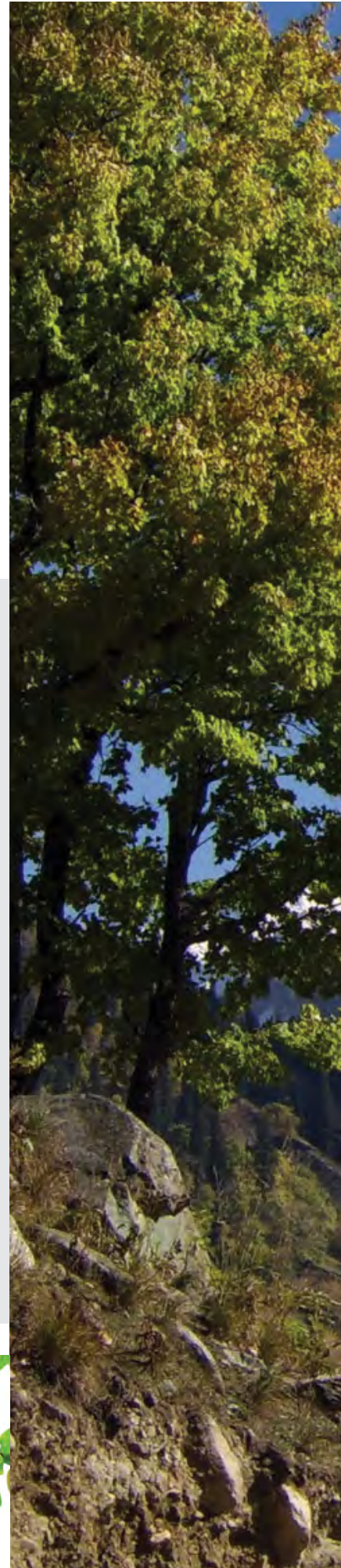
Conserving & Preserving our Natural Heritage

OBJECTIVES

Facilitate co-existence through interdependence

MISSION

Develop Symbiotic Models around Conservation-Community-Technology Imperatives





ACTION PRIORITY

Large Landscape Management Programs

Resource Management Programs

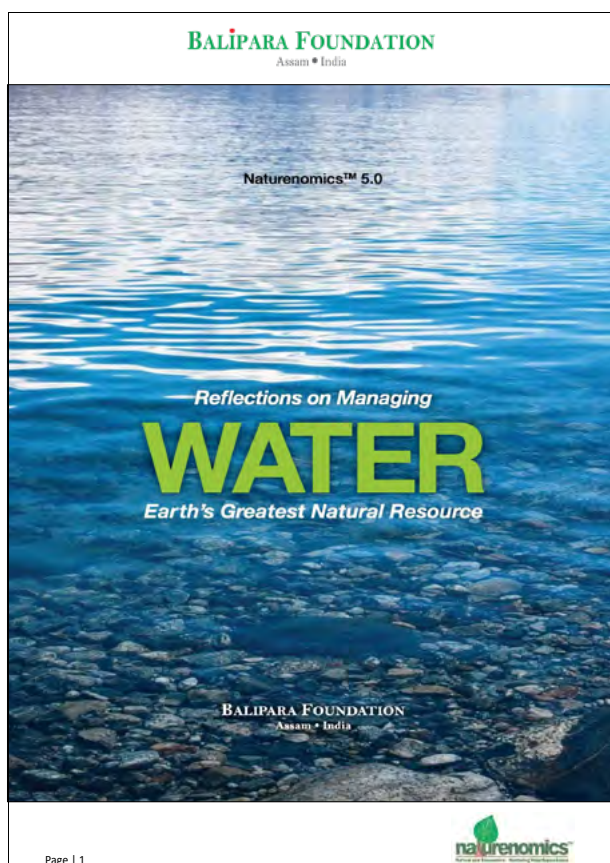
Knowledge Delivery Programs

Vertical	Programs	Program Objectives	Progress from 2015	Cost Incurred 2015 (INR Million)	Deliverables for 2016	Cost Estimates 2016 (INR Million)
Biodiversity Conservation	Kaziranga Landscape Conservation Program (continued)	<ul style="list-style-type: none"> Conduct Landscape Level Research on Wildlife Migration & Movement Patterns across the Landscape, with the Asian Elephant as the Flagship Species, to inform Landscape Conservation Planning Work with Local Communities & Private Land Owners, especially Tea Estates, to connect critical migration Corridors between Kaziranga- Karbi Anglong. 	<ul style="list-style-type: none"> Facilitated a Conservation Partnership Model between WCS- India Program, ANCF, Indian Institute of Science, Bangalore & APPL Foundation towards Research & Conservation Planning. Completed Phase 1 of Wildlife Occupancy Modeling in the 360 km2 area that connects the Kaziranga & Karbi Anglong Landscapes. Conducted seasonal observation survey on Asian Elephant Migration using the 3 traditional "corridors" that connect Kaziranga to Karbi Anglong. 	2	<ul style="list-style-type: none"> Undertake a Migration & Movement Pattern Study of Asian Elephants through Radio Collaring, a first-of-its-kind initiative in Kaziranga, with plans to Radio Collar 6 Elephants Secure the 4 critical corridors identified by WTI in the landscape (Kalapahar-Daigurung, Panbari, Kanchanjuri & Deochur). Submit a Conservation Action Report to the Government of Assam and other Stakeholders based on the Occupancy Modeling Study and data outcomes. Publish list of Critical Priorities and facilitate Action 	3
	Indo-Bhutan Landscape Conservation Program	<ul style="list-style-type: none"> Develop the Concept of an Indo Bhutan Green Belt (The Original Proposal for an Indo-Bhutan Green Belt, was discussed by both Governments in the mid 1980s.) Habitat Restoration of degraded forests in the region Build Forest Protection Capacities on both sides of the border Work with local communities and build their capacities to deal with HEC Situations 	<ul style="list-style-type: none"> Preliminary meetings conducted with the Department of Forests & Park Services, Government of Bhutan and a copy of the Original Proposal received. Developed a Technical Partnership with the Outreach Team at the University of North Carolina to mitigate Conflict and towards building community resilience. 	0.2	<ul style="list-style-type: none"> Develop the Indo Bhutan Green Belt Proposal covering 4000 Km2 with Opportunities in the present day context. Undertake a Pilot Reforestation Project in the Khalingduar Reserve Forest as a pre-cursor to future reforestation & restoration initiatives. Conduct Movement Pattern Study through Radio Collaring Estimate Asian Elephants Populations in the Indo-Bhutan Border Region/Proposed Green Belt. Form an HEC Rapid Response Team in the Udalguri District in the Indo-Bhutan Border 	5

Vertical	Programs	Program Objectives	Progress from 2015	Cost Incurred 2015 (INR Million)	Deliverables for 2016	Cost Estimates 2016 (INR Million)
	Botanical & Conservation Center	<ul style="list-style-type: none"> Establish a Center for Botanical Conservation & Conservation Research 	<ul style="list-style-type: none"> Partnership with River Journeys & Bungalows of India to establish the Center at their 22 Acre Campus in Assam. Conducted a Biodiversity Audit and identified the following species in the Campus <ul style="list-style-type: none"> # 54 Bird Species # 50+ Butterfly & Moth Species # 14 Amphibian Species # 9 Snake Species Established a Herbarium of 58 Medicinal Plants of Assam Established a Seed Bank of 150+ Species, including 72 varieties of Rice. Research Initiated: <ul style="list-style-type: none"> # 5 year Research on Growth Parameters of Tissue Culture Bamboo in progress (2 years completed) # Comparisons of Germination Rates in Forest Collected Seeds under natural & controlled environments. # Carbon Stock Estimation of Assam's Tree Varieties. # Disturbance Index in Reserve Forests of Sonitpur, Assam # Habitat Mapping of the Monocoloed Cobra in Sonitpur, Assam 	1	<ul style="list-style-type: none"> Herbarium of all 300+ Medicinal Plants of Assam Seed Bank of all 120+ Tree Species of Assam Seed Bank of 50+ 'non-hybrid' vegetable varieties. Orchid Bank of 300+ Species found in Assam Research Plans: <ul style="list-style-type: none"> # Floristic Survey of 5 National Parks of Assam # Ethno-botany Study of Assam # 5 year Research on Growth Parameters of Tissue Culture Bamboo in progress (2 years completed) # Comparisons of Germination Rates in Forest Collected Seeds under natural & controlled environments. # Carbon Stock Estimation of Assam's Tree Varieties. # Disturbance Index in Reserve Forests of Sonitpur, Assam # Habitat Mapping of the Monocoloed Cobra in Sonitpur, Assam 	5
Social Enterprise	Portable Water Delivery	<ul style="list-style-type: none"> Develop an Enterprise driven Model for the supply & distribution of safe and cheap drinking water to households, communities and townships. 	<ul style="list-style-type: none"> NA 	00	<ul style="list-style-type: none"> Study the Efficiency & Gaps of the Government-managed Rural Drinking Water Supply Scheme in Sonitpur & Udalguri Districts of Assam. Submit Plan to the State Government to Revive & Rejuvenate the Scheme 	1

Vertical	Programs	Program Objectives	Progress from 2015	Cost Incurred 2015 (INR Million)	Deliverables for 2016	Cost Estimates 2016 (INR Million)
	Waste Management Delivery (continued)	<ul style="list-style-type: none"> Develop an Enterprise driven model for Waste Management at the community & township level. 	<ul style="list-style-type: none"> NA 	00	<ul style="list-style-type: none"> Undertake Project on delivering the “cleanest rural market” in NER India at the Lokhra Bazaar in Assam. 	0.4
	Renewable Energy Delivery (continued)	<ul style="list-style-type: none"> Develop a Enterprise driven model for Renewable Energy Delivery to communities and small townships 	<ul style="list-style-type: none"> NA 	00	<ul style="list-style-type: none"> Undertake the “Renewable Campus Project” in partnership with Wild Mahseer Resorts, Assam, including renewable energy and water harvesting & recycling 	0.5
Events & Conferences	Balipara Foundation Awards 15	<ul style="list-style-type: none"> To honor 10 Outstanding Individuals/Organizations for their amazing contributions towards conservation in the Eastern Himalayas. 	<ul style="list-style-type: none"> A Total of 17 recipients in 10 Categories honored during the 3rd Edition of the Awards 3rd RN Barthakur Memorial Talk delivered by Prof. Gunter Pauli. 		<ul style="list-style-type: none"> The 4th Edition will continue to inspire through ‘stories in conservation’. Award Categories will include: <ul style="list-style-type: none"> # Nature Conservancy Award # Young Naturalist Award # Naturenomics Award # Eastern Himalayan Conservation Award # Green Guru Award # Food for the Future Award # Green Legal Award # Annual Award # Special Award- Forest Guards # Lifetime Service Award 	
	Elephant Talk: Asian Elephants in the Wild	<ul style="list-style-type: none"> The Objectives of the Conference are to define & monitor Targets for the Conservation of Asian Elephants. 	<ul style="list-style-type: none"> 2nd Edition of the Conference concluded with the following highlights: <ul style="list-style-type: none"> # To establish an Asian Elephant Secretariat in Assam # 3rd Edition will be conducted in conjunction of the Asian Elephant Specialist Group Meeting. # A Preliminary Report on the Status of Critical Elephant Corridors in Assam published by WTI. 	3	<ul style="list-style-type: none"> Formalizing the Asian Elephant Secretariat and its workings Create a dedicated website on Conservation Progress & Updates 	4

Vertical	Programs	Program Objectives	Progress from 2015	Cost Incurred 2015 (INR Million)	Deliverables for 2016	Cost Estimates 2016 (INR Million)
Knowledge Delivery	Education	<ul style="list-style-type: none"> Develop an Online Conservation Education Platform, customized for the Indian Market. 	NA	00	<ul style="list-style-type: none"> Launch Platform across 5 cities pan India. 	3
	Scholarship & Internship Program (continued)	<ul style="list-style-type: none"> Provide students & young scholars experiential & field-based based learning opportunities 	<ul style="list-style-type: none"> The Foundation awarded Internship Opportunities to 6 Students to complete the following assignments. # Identification & Categorization by Leaf, Fruit, Bark, Flower parameters of 50 Tree Species # Land Use Mapping & Carbon Stock Estimate of the 22 Acre Botanical & Conservation Center # Herbarium & Seed Bank Assignment # Disturbance Index Study of the Balipara Reserve Forest in Assam 		<ul style="list-style-type: none"> The Foundations will award a total of 10 Internship Opportunities in 2016 to undertake the following assignments: # Identification & Categorization by Leaf, Fruit, Bark, Flower parameters of 150 Tree Species # Herbarium & Seed Bank Assignment. # Species Population Estimates. # Social Media Interactions # Field Reporting # GIS Mapping Assignments # Field Surveys 	
	Skills Development Program	<ul style="list-style-type: none"> Empower people between the age groups of 18-30 by delivering multi faceted "real life skill sets" 	NA	00	<ul style="list-style-type: none"> The Foundation will set up a Training Center for developing skill sets in Bamboo Product Manufacturing. 	3
	Publications	<ul style="list-style-type: none"> Publish a Series of Books under the NaturenomicsTM brand. 	<ul style="list-style-type: none"> Published the Naturenomics V 5- "Reflections on Managing Water". The book was released in 4 Locations across India. 	3.3	<ul style="list-style-type: none"> Naturenomics V 6- The Future of Renewable in India. Field Guide on the Trees of North East India by Dr Jatindra Sharma Elephant Stories by Dr KK Sharma 	



OUR NATURAL INHERITANCE

Through the ages we have used nature's capital to surge economic growth. This use, overuse, and misuse of nature have eventually put both of "us"; the "consumers" and the "resources" on the verge of destruction. We have paid a very high price for the phenomenal economic growth and now are in danger of derailing the same growth if we do not manage our natural assets in a more effective and sustainable manner.

There are two imperatives which will underlie the principles of Naturenomics™:-

- A Major Paradigm Shift - adjusting the balance of power by displacing economics at the heart of all activity, and replacing it with nature assets as the soul of all activity.
- Agree To A Common System And Methodology Of Valuing Nature Assets - just as there are generally accepted accounting principles (GAAP) in economic accounting, and accepted methods like net asset value and discounted cash flows of valuing economic assets,

we need to develop a 'green accounting methodology' (GAM) and a Nature Quotient (NQ) - a list of nature parameters to measure ecological value and performance.

IN THE SPIRIT OF NATURENOMICS™ 5.0

India known for its water resources, traditional systems of water conservation, supply management, reverence and celebration of water is unfortunately suffering from misuse of water. In India, agriculture accounts for 80 per cent of water use and the country is the largest groundwater extractor in the world, with 70 percent of irrigation coming

from groundwater sources.

This situation is largely avoidable if water management improves, which begins with an understanding of its facets and a commitment of total involvement.

The book begins with a look at global water resources, and then focuses on India, deep-diving into India's water resources, its celebration, use and abuse of water, legal aspects and the linkage of water with nature. The book also talks about the steps needed for assuring water abundance and calls for action on various fronts: From rekindling relationship with water through concerted and continued

Dr. Indira Khurana, Ranjit Barhakur and Jairam Ramesh, MP



Ranjit Barhakur presenting the book to Tripura CM, Manik Sarkar



Ranjit Barhakur presenting the book to N. Chandrasekaran and S. Ramadorai





Launch of Water in Guwahati. From left - Jitesh Khosla, Former Chief Secretary to Govt. Of Assam, Ranjit Barthakur, R.K Krishna Kumar, Advisor Tata Sons, Gautam Barua, Director IIIT Guwahati and Chief Minister in the podium.

campaigns, and to involve people bringing in efficiencies in use to facilitate innovation.

It also calls for a large scale recharge of aquifers through natural and artificial means, serving also as sponges to soak up water during excessive rain. What makes the book special is the inclusion of perspectives by global and national leaders, the focus on evidence and data and perspectives from the ground. The abundant pictures have their own story to tell. High on optimism the book is a must read who are concerned and want to act and those who need to be converted.

The timeliness and the urgency of the book cannot be ignored. Water is the very foundation of socio-economic growth and essential for life. It's now time to sit up and act, since clearly a business as usual approach will not work. The book attempts to throw light on some of the areas that can be worked upon so that there is water for everyone, always and forever.

REVERSING THE TREND

- Celebrate water
- Uphold principles of equity, rights and sustainability
- Inform and involve people
- Learn from case studies and bio-mimicry
- Achieve breakthroughs through technology
- Harvest rain and scale up artificial recharge
- Bring efficiency in water use for agricultural production and urban supply and consumption
- Be a water conscious and responsible industry
- Stretch water use through multiple use of every drop
- Create an enabling environment that nurtures innovation

CHAPTERS

- Chapter One : WAR – The World's Aqua Resources
- Chapter Two : India's Water Can
- Chapter Three : Revering and Celebrating Water
- Chapter Four : Water at Work
- Chapter Five : Water Desecration
- Chapter Six : Wrath Yatra – Fury of Floods
- Chapter Seven : Damocle's Sword – The Spectre of Drought
- Chapter Eight : Rain – Harnessing the Obvious
- Chapter Nine : Linking Life- Water and Nature
- Chapter Ten : Legal Landscape of Water
- Chapter Eleven : Towards Abundance – Assuring Water Security

"Water" was released in Delhi by a host of global leaders: Dr. M.S. Swaminathan, Former Chairman, National Commission on Farmers; Mr. Ajit Seth, Cabinet Secretary, Government of India, Mr. Ramadorai, Chairman, Indian National Association for the Club of Rome and NSDC & NSDA, Prof. Norman Thomas Uphoff, Professor from Cornell University, Mr. T Nanda Kumar, Chairman NDDB, Dr. Ashok Khosla, President Emeritus, Club of Rome and Chairman, Development Alternatives and Mr. Ranjit Barthakur, Chairman, Balipara Foundation, Assam.



Elephant Talk 2015

ET 2015 – Intro, Objective, Key participants

“Without large scale, coordinated and collaborative efforts, the future of the Asian Elephants is anything but secure. Indeed, it is imperative that multiple organizations, both Governmental & Non-Governmental, will have to figure out a way to coordinate efforts across large landscapes to ensure that positive and quantifiable influences are retained on the ground. It is easy to see that fragmented efforts & initiatives, despite the enormous resources being invested, is unlikely to work. While we all agree that time is fast running out for the Asian Elephants, we will all have to join the ranks and launch a coordinated offensive against the threats facing Elephant populations. Anything less might not work”.

Ranjit Barthakur,
Chairman
Balipara Foundation



Building on the momentum created during the inaugural event last year, Elephant Talk 2015 attracted thought leaders, conservationists, environmental activists, green gurus, sociologists, anthropologists & geographers, from governmental & non-governmental organizations across the world. Some of the brightest minds in Elephant Conservation



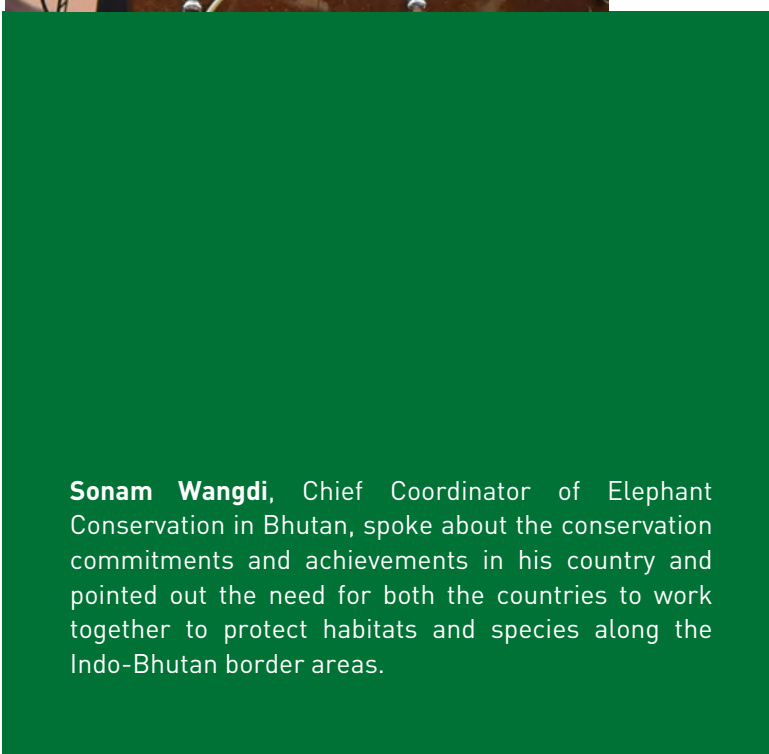
spoke and presented during the Conference. The outcomes of discussion were represented by a 6 Point Resolution Outcome to guide Conservation Efforts in the future. Among the most important outcome was the consensus to establish an Asian Elephant Secretariat to plan & execute Conservation Strategies in the North Eastern Region of India and along its International Borders.

Objectives

1. **Prioritizing Corridors that need to be secured,**
2. **Prioritizing Habitats that need to be enriched,**
3. **Investing in Technology & Research to manage conflict**
4. **Reforming Governance Structures to strengthen localized conflict mitigation**
5. **Lobbying for policy reforms.**
6. **Strengthening collaborations between Governments- Conservation Organizations- People.**



R. K. Srivastava, Inspector General of Project Elephant opened the talk by giving a brief introduction on the issues and threats faced by wild elephants and the conservation initiatives. He suggested that strategies like trans-boundary coordination will help in elephant conservation.



Sonam Wangdi, Chief Coordinator of Elephant Conservation in Bhutan, spoke about the conservation commitments and achievements in his country and pointed out the need for both the countries to work together to protect habitats and species along the Indo-Bhutan border areas.



Ranjit Barthakur, Chairman of Balipara Foundation, did a critical review of the 10 resolutions that were adopted at the Elephant Talk, 2014, and admitted to the poor performance with regards to fulfil them. He called for unconventional thinking on conservation planning, and to build a “microcosm” for conservation by developing a sort of a Knowledge Centre on elephants and working at a global level.



Reducing Stress Levels of Wild Elephant populations in the North Bank Landscape of Assam – **Dr. Abhijit Rabha**, Addl. PCCF, Karbi Anglong Autonomous Council. Dr. Rabha talked about the long term threats elephants have faced in the North Bank Landscape and suggested a few measures to reduce the stress levels of elephants like restoring water sources and habitats and working for Private Public Partnerships.

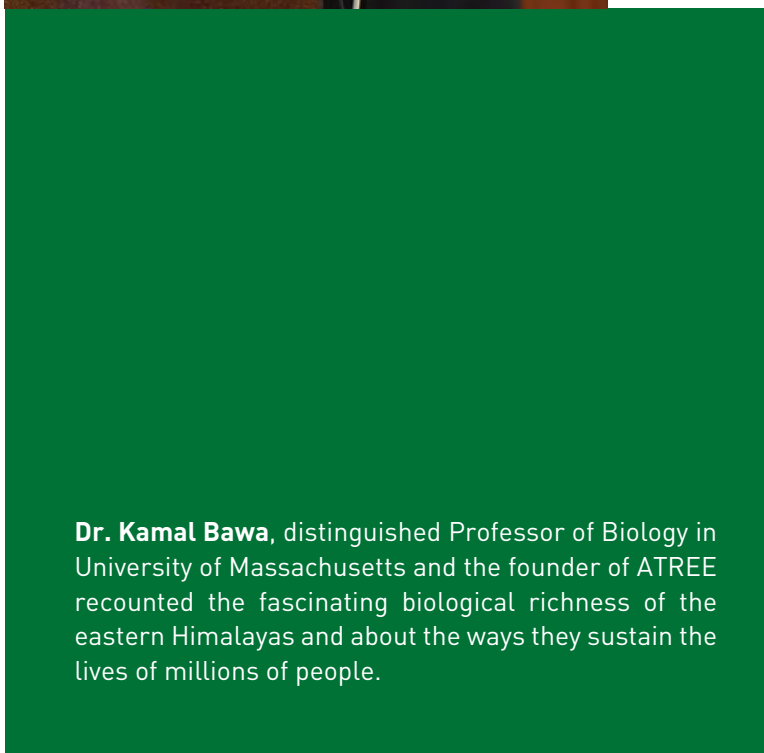
Managing human-elephant conflict: Knowing when and where to focus mitigation measures – **Dr. Varun Goswami**, WCS. Dr. Goswami gave an overview of dynamic occupancy modelling in conflict incidents and how science can help in better understanding of landscape specific issues and to prioritize areas for mitigation measures across time and space.



By the People, For the People, Of the People: Community-based Management of Elephant Conflict in North Kanara District, Karnataka – **Dr. Prachi Mehta**, Executive Director, Wildlife Research and Conservation Society (WRCS). Dr. Mehta presented her study where despite the Forest Department's active mitigation measures, conflicts still continue. She demonstrated the effectiveness of innovative and low cost techniques, coupled with active community participation and vigilance for conflict management.



HEC mitigation through Community Stewardship: Case Study from the Indo-Bhutan Border – **Lisa Mills**, State University of North Carolina. Prof. Mills illustrated the grim situation of HEC and her work in Udalguri, which falls in the Indo-Bhutan Border. She narrated her experience of working to build the capacity of local youth in HEC monitoring and of strengthening the resolve to save the elephants in the region. She also spoke of her idea of producing “Elephant Tea”, which is safe for the elephants.



Dr. Kamal Bawa, distinguished Professor of Biology in University of Massachusetts and the founder of ATREE recounted the fascinating biological richness of the eastern Himalayas and about the ways they sustain the lives of millions of people.



Country wide Perspective of HEC in India – **Harshad Karandikar**, World Wide Fund for Nature-India (WWF-India). Mr. Karandikar presented an overview of a wide range of the HEC management practices of the organization in various landscapes of the country and highlighted the issues faced by each of them in up scaling the achievements through good governance. He recommended a few strategies for better mitigation and reduction of the conflicts by means of research and proper application of dynamic pushback and physical barrier systems, coupled with a restructured system of ex-gratia.



Dr. Vivek Menon, who has recently been appointed as Chairman of the IUCN's Asian Elephant Specialist Group. Flagged two important issues in protecting wild elephants today, the emergence of poaching and blocking of wildlife corridors/movement passages, citing the recent fight to bring down a concrete wall at Numaligarh Refinery which has blocked traditional elephant movement in the area.

Managing Priority Corridors – **Dr. Anupam Sarmah**, WWF-India. Dr. Sarmah highlighted the fact that economic growth is a major driver for conflicts. He illustrated the status of corridors in both the North Bank Landscape (NBL) and Kaziranga-Karbi Anglong Landscape (KKL). He said that most of the corridors in NBL which are near Arunachal Pradesh are fast degrading due to various anthropogenic disturbances. He spoke of WWF-India's initiative to secure the corridors through mapping, monitoring, community engagements, interim relief scheme to manage human-wildlife conflicts and capacity building support to the Forest Department.



Prof. Raman Sukumar of the Indian Institute of Science, pointed at the importance of the contiguous landscape of North Bengal, North Bank of Brahmaputra, Kaziranga-Karbi Anglong Landscape and Meghalaya, in terms of elephant distribution. He recommended conversion of areas in tea gardens into forest plantations which will provide passage to elephants, besides promoting tourism. Government funds could be used in innovative ways to preserve biodiversity, alongside securing the Indo-Bhutan elephant corridors as the "Green Belt". He also reiterated the need to balance conservation with social justice, coupled with necessary development.



Conservation Action and Interventions to Secure Elephant Populations and Habitats – **M. Muthanna**, WCS. Mr. Muthanna spoke of the various issues of international nexus of poaching, electrocution incidents and religious tourism and of the various conservation actions undertaken by WCS where the conservation focus is to create more space for wildlife by caring more for people.

Ravi Singh, CEO- WWF- India

Mr. Singh suggested the following:

Make a structured recommendation for a Trans-boundary Elephant Reserve in India, Nepal and Bhutan. The need to move beyond the local. While it is important to factor in the local it is equally important to move beyond political boundaries.

The need to come together regionally. This can be easily facilitated by the institutional networks, legislations and government capacity that is already in place.



Om Prakash Pandey; PCCF (WL) Assam

Mr. Pandey raised the concern for the reverse effect of conservation. Kaziranga is shrinking and cannot actively support the rising population of the animals.

Community participation and acceptance is critical as rhino population will continue to increase if conservation measures continue. Acceptance of projects/programmes from forest officers and government officials is of no consequence if the community is not accepting of the conservation plans and results.



6 Point Resolutions Elephant Talk 2015

5th & 6th November 2015. Guwahati, Assam

Creating Drivers for Asian Elephant Conservation

Asian Elephant Secretariat

Establish a regional Think Tank to drive the implementation of the major recommendations of Elephant Talk 15.

Wildlife Protection Acts:

Prepare a Position Paper on reforms that need to be introduced into the Wildlife Acts.

Generation Next:

Involve Generation Next in already existing programmes and through innovative programmes.

Transboundary Protection & Corridor Connectivity:

Prepare a list of “high priority corridors” that need to be secured in the North Eastern Region of India & bordering states.

Prepare an Action Plan for securing these “high priority corridors”

Captive Elephants:

To promote the welfare of captive elephant and its management, establish a training centre for mahouts, and wildlife managers and veterinarians.

Human Elephant Conflict Resolution:

Engage local community and other stakeholders to develop and implement a comprehensive protection plan to reduce elephant & human deaths.

Prepare a Position Paper on reforms that need to be introduced to strengthen Governance Structures, Compensatory Mechanisms & Research & Technology Interventions to manage Conflict.

Develop Educational & Awareness Tools for educating Local Communities on Incidence Management



The Hon'ble Chief Minister of Assam, Shri Tarun Gogoi, appreciated the initiative of the Talk and acknowledged the delegate's' participation in the same.

2015 BALIPARA FOUNDATION AWARDS

The Eastern Himalayas is the bio-geographical gateway to India's richest biodiversity zone and is unique for its genetic resources. However, the rapid growth in population is creating a number of environmental problems because of uncontrolled urbanization, industrialization and massive intensification of agriculture and destruction of forests.

The region is very rich in biodiversity, and it is known as one of the 17 biodiversity hotspots of the world. Physiography, climate and soils of the region have in combination provided a suitable condition for luxuriant growth of forest in the region. But, unchecked economic activities and population growth have left their scars on the landscape in many of the drainage basins of North East India, particularly from the last few decades. Over the last ten years significant changes have been taken place on the issue of forest cover changes. Such changes are the result of the relocation of the people to river sides, extensive deforestation, farm and grazing abandonment etc. Intensification of agriculture and huge industrial activities supplemented with the above resulting in climate change, soil erosion, flood, siltation, reducing precipitation & habitat extinction in the region.

The Balipara Foundation has been a leading advocate of Biodiversity Conservation of the Eastern Himalayan Region. The Foundation, has been documenting, analyzing and promoting the concept of Naturenomics™ for over a decade now. It seeks to bring the objective of economics in line with the imperatives of nature.

Keeping up with the inherent spirit of wild life conservation through Naturenomics™ and scouting alternative strategies for wild life conservation, We at Balipara Foundation once again acknowledged and brought into focus the inspirational conservation work in Eastern Himalayan Region of India.

This year the canvas for these awards were spread from bringing out the inspirational conservation work in Eastern Himalayan Region of India, ranging from the protection of endangered species and threatened habitat to the promotion of environmental education and the development of community driven conservation.

These focus of these awards is to act as a channel which will bring out, celebrate the success of grass root environmentalist. We through these awards make a humble effort to act as a catalyst in bringing out such initiatives which are both people and wild life sensitive to the larger audience.





3RD RABINDRANATH BARTHAKUR MEMORIAL LECTURE Prof. Gunter Pauli



Gunter Pauli (born 1956 in Antwerp) is a self-styled “serial entrepreneur”, author and initiator of The Blue Economy. He is to sustainability what Steve Jobs was to computing. His concept of a Blue Economy is based on the premise that we need to be able to provide the basic needs for all, from what we have, we need to move from an economy where what is bad is cheap and what is good is expensive, to a system where the sustainable option is the cheapest and the best. His entrepreneurial activities span business, culture, science, politics and the environment. Under his leadership, a small European company pioneered an ecological factory. He founded the “Zero Emissions Research and Initiatives”

His latest initiatives include the redesign of mining, urban development and economic growth based on happiness and competitiveness

(ZERI) at the United Nations University in Tokyo, and subsequently established The Global ZERI Network, redesigning production and consumption into clusters of industries inspired by natural systems. He is dedicated to design and to implement a society and industries, which respond to people’s needs using what is available. His latest initiatives include the redesign of mining, urban development and economic growth based on happiness and competitiveness. Fluent in seven languages, and having lived on four continents, he is a world citizen. He has also authored 15 books and 200 fables bringing science and emotions to children, which have been published in 30+ languages. He is father of five sons, one daughter.

IS YOUR BUSINESS SUSTAINABLE?

In The 90's I was the biggest buyer of Palm Oil from Indonesia. The govt. of Indonesia gave me a red carpet welcome when I visited them. Using the palm oil I was making bio-degradable soaps for the buyers in Europe. And apart from generating thousands of jobs in Indonesia, and making soaps in a zero wastage factory I was also helping clean up the rivers of Europe. I was already hailed as the "Green Guru". But then I discovered something that while I was cleaning up the rivers of Europe I was in effect destroying the rainforests-the habitat of thousands of wonderful animal and plant species-like the Orang-utan

So I discovered that I was doing was not Sustainable



A LOT CAN HAPPEN WITH COFFEE

To be sustainable we need to break out of our present mindset. And to do that we need to innovate

Take the example of coffee. We can take the waste of the coffee, mix it with straw and farm mushrooms. And with the mushroom waste you can feed your chickens (or your dog if you are a city dweller)

Today there are over 3000 mushroom farms in Africa doing this. But most importantly this is so easy to do that even children can adapt it and learn about sustainability from childhood.



THE REAL MEASURE OF SUCCESS

We spend huge sums of money on petroleum and gas. But can we do something differently? And sustainably?

We tapped trees and extracted turpentine from them. This was then used as a substitute for petroleum. This helped save huge amounts of money. Which we then used to give the local populace three litres of pure drinking water-a scarcity in those parts. We also gave every child over six years a bicycle.



So what happens when a child gets to drink pure water and cycle every day? He stays healthy.

We had also opened a big hospital for them. Which had to be closed down shortly due to the lack of enough patients.

So let us not measure success by the number of additional hospital beds but by the number of hospitals you have closed down

PAPER FROM STONE

Paper making involves cutting down of trees. So how do we innovate?

By making them from stone of course!

We crush stone to 3 microns then add a polymer (which can be old plastic bottles)

This process does not require water or cellulose and it can be recycled forever.



THE TUSK FAIRY-A FABLE

I have written hundreds of fables for children. Each teaching our children some basic lesson on how they as future leaders should view our world.

They are going to be launched by the Chinese government soon.

The tusk fairy is one of them, based on the fact that the elephant population across the world is rapidly dwindling thanks to the rampant poaching going on for their tusks.

While a huge number of ideas have been tried to control poaching, this is a problem that has remained, mainly due to the fact that the demand for ivory is very high.



So we decided to make use of the little tooth that baby elephants shed- and which must be lying in the thousands around the savannah.

But these little tusks are not in much demand mainly because they are smaller and also because they are much harder to cut and shape. We challenged the Chinese craftsmen to use their skills on these tusks and join them to form larger pieces of work.



INSPIRING OUR CHILDREN

If we just teach our children what we know-they will never do better than us

We need to go from teaching to learning ourselves on how to inspire

We need to tell our children inspiring stories so that they can become leaders of tomorrow

SET TARGETS



DEFINE STRATEGIES



INSPIRE THE CHILDREN



(Excerpts from the speak by Prof. Pauli)

Nicholas Claxton

The host of Balipara Foundation 2015 awards



Nicholas Claxton is the co-founder & CEO of WOW Media, a branding and creative communications agency based in Dubai. With a strong working knowledge and proven experience of the Middle East, Nicholas has also been spearheading the editorial and commercial strategy for the launch of a 24x7 satellite TV Channel and is the former managing director of Elaph Publishing – one of the largest and respected online daily newspapers in the Arab world. He is also an EMMY Award Winning Film Maker with an extensive track record and credits as an executive producer, director and producer with the BBC, ITV, Channel 4, National Geographic, Discovery, A&E Network & Disney, among many others. He

was the Producer of the Emmy Award-winning 1984 television documentary Cry Ethiopia Cry (on the Ethiopian famine) which won a National Academy of Television Arts and Sciences Emmy Award for outstanding background/analysis of a single current story and the Winner of the coveted Cable Ace Award for his film Linda McCartney – Behind The Lens. He was also the Producer of the 3 part music series – 'The Rhythm of Life', with the Beatles Producer, Sir George Martin. He won New York International Film and Television Festival Grand Trophy and Gold awards for The Film Apartheid's Assassins (1991), on South Africa's infamous death squads; and Winnie Mandela and The Missing Witness.

His South African visa exemption was withdrawn following the BBC broadcast of his film Suffer the Children, an expose on the detention and torture of children. He was also the Producer and Director of the Film – 'The Price of Progress', presented by Bob Geldof which was a Damming indictment on some of the World Bank funded Projects involving Forests & Dams in Brazil, India and other parts of the World. He & Bob Geldof was invited to present the film at a special screening to the US Senate. Nicholas is a Fellow of The Royal Geographical Society and, together with the late Mark Shand, a Founding Trustee of the London-based Charity Elephant Family.

NATURE CONSERVANCY AWARD

Panchan Lakhar Community Conserved Area Management Committee (PLACCAMC)

Arunachal Pradesh, Community

Panchan Lakhar Conserved Area Management Committee Members from Tawang Arunachal receiving the 2015 Nature Conservancy Award from Professor Dhrubajyoti Saikia, Vice Chancellor, Cotton State University



The local communities in and around forests are the real stakeholders and are best equipped to protect the forests and its wildlife and their involvement is extremely crucial. The villagers of the Kharman and Kyalegteng in Arunachal Pradesh are a testimony to this fact. In 2011, these villagers, inspired by the idea of Community Conserved Area approached the Tata Trusts and WWF – India for technical and financial support in demarcating 85 sq. km. of Unclassed State Forest land as the Pangchen Lakhar Community Conserved Area (PLACCA). The PLACCA comprises Panchayat members, village elders and youth who work for the conservation and management of their verdant forests, thereby securing the habitats of endangered red pandas, musk deer, serow, goral, Himalayan black bears, Siberian weasels, leopards and wild dogs. PLACCAMC has been encouraging the villagers to revive their dependency on agriculture and put into practice some of the pilot mitigation techniques to combat human-wildlife conflicts. For PLACCAMC's foresight and unified efforts in conservation, the team was awarded The Balipara Foundation Nature Conservancy Award.

Impact: Created and protecting 85 square kilometers of unclassified state forest land which is home to more than 150 species of Flora and Fauna, including the endangered mountain leopard and siberian weasel.

Professor Dhrubajyoti Saikia

Eminent astrophysicist Prof. Dhruba Jyoti Saikia is currently the Vice Chancellor of Cotton College State University. Prior to his taking over charge, Dr Saikia was senior Professor at the National Centre for Radio

Astrophysics of Tata Institute of Fundamental Research (NCRA-TIFR, Pune).

Among many other laureates Prof. Saikia was awarded Young Scientist of the Year by the Indian National Science Academy in 1985. In 1986, he was elected as

Young Associate of the Indian Academy of Sciences, Bangalore. He was awarded Prof. M.K. Vainu Bappu Gold medal of the Astronomical Society of India in 1990. In 2011, Prof. Saikia was elected as Fellow of the National Academy of Sciences.

YOUNG NATURALIST AWARD

A young person between 15 to 25 years, whose life has been dedicated to the protection of nature. The individuals are agents of change and thought leaders of tomorrow and may be students, researchers, employees, or villagers.

Thingnam Girija



Manipur

Thingnam Girija's love for flowers and children is evident through her work as a teacher working with autistic children. But it is her lifelong passion for flowers that led her to create a one-of-its-kind website www.flowersofindia.net along with Dr. Tabish Qureshi, a physics professor at Jamia Millia. The duo undertook this endeavour when they realized that there was little to no information available online about India's floral heritage. The project took the duo across the terrains of north and northeast India to photograph and study flowers. They, then painstakingly put together

the website. Today, this is an ongoing community project, a forum for flower enthusiasts across the country to send in photographs and information. All the work behind maintaining, upgrading and contributing to the website is done on a voluntary basis, with a sole purpose of disseminating information. Thingnam was also awarded the Young Achiever Award in 2010 in New Delhi by the North-East Centre for Environmental Education and Research (NECEER). For her exceptional initiative, Thingnam Girija was awarded The Balipara Foundation Young Naturalist Award.

Impact: Creation of knowledge bank and world class, first of its kind website on Flowers of Eastern Himalayas. An encyclopedia with information and photos of more than 1000 species with over 10 years of research.

Ranjan Saikia presenting Young Naturalist Award to brother Samom On Behalf of Thingnam Girija



Ranjana Saikia

Mrs Saikia is Director at Teri & leads the team towards instilling environmental values and sensitizing youth of all ages and, through them other sections of society. Mrs Saikia has over 24 years of experience in the field

of environment, education & community development and has undertaken several projects and awareness activities with focus on environment.

Mrs Saikia held several positions at TERI and has made significant contribution towards

sensitizing teachers and youth on issues related to water, energy, solid waste, air pollution, climate change, biotechnology, biodiversity, with an aim towards increasing their awareness and knowledge, and build capacity on pertinent issues.

NATURENOMICS™ AWARD

The current model of economic development forces us to make a choice between development & sustaining natural resources. Contrary to this belief, Naturenomics™ believes that this need not be a choice, but the only choice to have economic development along with sustaining our natural resources. This award is presented to a green entrepreneur whose financial and ecological success has proven to be sustainable in wealth formation through the securitization of natural assets such as food, water, energy and environment.

Richard Belho
Nagaland

*Richard Belho winner of
Naturenomics™ award received
award from Tanushree Hazarika*



An architect by profession, Richard Belho was keen to provide avenues to promote art and culture while protecting the environment. In 2002, he set up Zynorique, a Bengaluru-based firm along with Kezhagwetuo (Ato) Peseyie to impart training and employable skills to the local youth of Nagaland. Through the organization he aims to inspire and motivate youth to protect the environment and create awareness about Nagaland's art and culture. Over the last decade, through Zynorique, Richard and his team have worked on several initiatives with the goal of empowering the people of Nagaland. For his unique efforts, Richard Belho was awarded The Balipara Foundation Naturenomics™ Award.

Impact: Through his organization Zynorique, over the last 10 years, an estimated 600 youths from Nagaland have gained skills and a steady means of livelihood through crafts and nature led conservation initiatives.





Rupjyoti Saikia's efforts to provide training, and other facilities to local weavers led to a movement that saw M / S Artistic Traditional Textile being established in Bochagaon. This has been beneficial to rural women and helped them become financially independent. Saikia continues to conduct training programmes for women artisans on design implementation, surface ornamentation, new techniques and modern market trends. She enables sales through her boutique 'Kaziranga Haat' in Bochagaon and also reaches out to suppliers around the country. Her products are also sold through exhibitions locally and nationally. Her textile and other ventures such as a restaurant Rup's Kitchen and NGO Farm 2 Food Foundation has seen the employment and empowerment of more than 200 unemployed youth and underprivileged women. For her unstinting efforts in the upliftment of rural women and youth, she was awarded The Balipara Foundation Naturenomics™ Award.

Impact: A true epitome of empowerment through entrepreneurship who with the help of skills and training have empowered more than 200 women and unemployed youths.

Tanushree Hazarika

A business management graduate from Boston University, Tanushree has worked previously in MNCs like Fidelity and Morgan Stanley in the US. She has been successfully bringing out the most popular English magazine of the region, Eclectic Northeast since 2007. Tanushree is also the founder of Tattva Creations, which provides brand and communication solutions to corporates and organizations. Recipient of the Young Communicator award from the Symbiosis Institute in 2010 and the Outstanding Woman Achiever award by FICCI Ladies Organization in 2013. She is a Fellow of the India Leadership Initiative and a member of the Aspen Global Leadership Network.



GREEN GURU AWARD

The Green Guru Award recognises a green teacher whose purpose in life is to inspire young people to respect, learn about and protect nature. The individual should have leadership qualities, including missionary zeal, passion and dedication so that others may seek to emulate his or her example.

Nimesh Ved Meghalaya

*Roshmi Goswami presenting
Green Guru Award to Nimesh Ved*



Under Nimesh Ved's leadership, Samrakshan, a non-profit organization has been working towards conservation education and capacity building for over a decade. His organization has collaborated with local communities to secure the Balpakram-Baghmara landscape which is now identified as a top priority elephant corridor. He also undertook staff training and surveys to help establish the Tokalo Wildlife Sanctuary, which was subsequently notified. His undying perseverance in providing and taking conservation education to the remotest corners of the Northeast is truly commendable. Recently, the Mizoram Forest Department invited him to provide his expertise and guidance to resolve conservation issues in the Dampa Tiger Reserve. Nimesh is currently working on highlighting the palm oil menace in the region. For his tireless efforts, he was awarded The Balipara Foundation Green Guru Award.

Impact: A prolific Conservation educationist, who took conservation education to the remotest corners of Eastern Himalayas. Sensitized more than 2500 individual, community leader, forest dwellers and foresters over a decade of dedicated service.



Dr. Roshmi Goswami is a leader in the feminist movement in South Asia, well known for her pioneering work with women in the conflict-affected regions of India. She co-founded the North East Network, a women's rights network in North East India. She was a Program Officer with the Ford Foundation, New Delhi office for several years, supporting cutting-edge work on women's rights in India, Sri Lanka and Nepal. Dr. Goswami is associated with several human rights organizations, and serves in the Board of Directors for Urgent Action Fund for Women's Humans Rights.



Dr. Vivek Menon Chairman of IUCN's Asian Elephant Specialist Group addressing audience after Presenting Award to BIOCON



Biodiversity And Nature Conservation Network (BIOCON)

BIOCON is only five years old, having been officially launched in October 15, 2010 in Mizoram and has since then quickly garnered a strong reputation as a supporter of Mizoram's wilderness areas. The organization believes in covering a lot of ground through education, outreach programmes including forest and lake clean up drives, awareness programmes and field work such as building and using nest boxes for birds. BIOCON's systematic approach at the grassroot level has truly made a difference and hence was awarded The Balipara Foundation Annual Award.

Impact: An Conservation outreach organization which has conserved 1500 hectares of forest land with the help of community leaders and conducted outreach and conservation activities in more than 200 villages and semi urban areas in Mizoram



FOOD FOR FUTURE AWARD

A visionary individual, who might be a scientist, NGO, villager or entrepreneur who has made a significant contribution to the promotion of organic food, or has demonstrated alternative farming methods that increase yields using ecological principles that have brought about replicable change.



K. M. Bujarbaruah Assam

*Dr. K.M. Bujarbaruah,
Vice Chancellor, Assam
Agricultural University, Winner
of 2015 Balipara Foundation
Food for Future Award, receiving
the Award from Professor
Kamal Bawa, Founder ATREE*

K.M. Bujarbaruah's meritorious career in various capacities ranging from a scientist to the Director of National Research Centre and Indian Council of Agricultural Research (ICAR) Research Complex for Northeastern Hill Region and Deputy Director General (Animal Sciences), ICAR, New Delhi have seen him contribute immensely to the improvement of agricultural technology and practices in the Northeast. Blessed with a good scientific and administrative acumen, he introduced sustainable agricultural technologies to the

farming community throughout the Northeast. He organized the first ever International Conference on Organic Farming in 2004, and is a true champion of health and sustainability. He has been conferred with several prestigious awards for his work including the Fakaruddin Ali Ahmed Award, Jewel of Sikkim Award and Distinguished Veterinarian Award. For his exemplary scientific contribution, Dr. Bujarbaruah is recognised as a fellow of the National Academy of Agricultural Sciences and fellow of National Academy of Veterinary

Science. For his distinct scientific contribution to agriculture Dr. K.M. Bujarbaruah was awarded The Balipara Foundation Food for Future Award.

Impact: A leading scientist with over 40 years dedicated service, introduced sustainable agriculture technologies to more than 300 farming communities throughout North East. Currently the Vice Chancellor of Assam Agricultural University, which was awarded the best and most promising Agricultural University in India.

Dr. Kamal Bawa is a Distinguished Professor of Biology at the University of Massachusetts at Boston. He has held Bullard, Cabot, and Giorgio Ruffolo Fellowships at Harvard University at various times. He has also been named a Guggenheim Fellow as well as a Pew Scholar in Conservation and the Environment.

Kamal Bawa, has published more than 180 papers, and edited 10 books, monographs or special issues of journals. He is the editor-in-chief of *Conservation and Society*, an interdisciplinary journal in conservation, and also serves on the editorial boards of several other journals. Kamal Bawa is the Founder-President of the Ashoka Trust for Research in Ecology and the Environment (ATREE), a non-governmental organization devoted to research, policy analysis, and education in India.

GREEN LEGAL AWARD

This award is for a lawyer or an organization that has used the courts to win justice for wildlife or for communities living in or around ecologically fragile wildernesses.

Ritwick Dutta New Delhi

*Ritwick Dutta, Winner of 2015 Green Legal Award
receiving the Award from, Hasina Kharbhih*



Ritwick Dutta's love for India's wilds manifested early in his life and an insuppressible urge to protect those very wilds led him to become an environmental lawyer. Having a degree in sociology, a law degree from the University of Delhi and a Diploma in Environmental Law from the Centre of Environmental Law, WWF – India, he believes his true training and understanding of the scenario came from travelling extensively around the country. To tackle the main culprits of environmental degradation - dams, mines and deforestation, he along with Rahul Choudhury, Environment lawyer, founded the Legal Initiative for Forest and Environment (LIFE). Today he is the most active lawyer of the National Green Tribunal (NGT) brigade which was setup in 2010. He is also a member of the Environmental Law Alliance Worldwide (ELAW),

a select global network of environmental lawyers, where Ritwick has served as an investigator for TRAFFIC India to delve into the illegal trade in CITES – listed species. He has been serving as a legal advisor to the Wildlife Trust of India and the Himalayan Environmental Studies and Conservation Organization (HESCO). For bravely dedicating his life to fighting environmental injustices, he was awarded The Balipara Foundation Green Legal Award.

Impact: Founder of Legal Initiative for Forest and Environment (LIFE) is one of the leading environmental litigators of India. With over 150 successful environment litigation cases under his belt, Ritwick feels he's just started..

Hasina Kharbhih is the Founder of the Impulse NGO Network and Impulse Social Enterprises.

Under her leadership, the Impulse team developed the internationally recognized Impulse Model to comprehensively address the root causes and persistent challenges of human trafficking.

The most successful work is Public Interest Litigation filed to National Green Tribunal, that stopped a 30 years rat hole coal mining in Meghalaya, which used more than 70000 child labour trafficked children.

EASTERN - HIMALAYAN CONSERVATION AWARD

This award is for an individual, community or organization that has significantly and successfully worked to protect the wildlife or wildernesses of the Eastern Himalaya upon which millions of people depend for their sustenance.



**Khanchendzonga
Conservation
Committee (KCC)**
Sikkim, Community

*Khanchendzonga
Conservation
Committee Members
receiving the 2015
balipara Foundation
Eastern Himalayan
Conservation Award
from L.Somi Roy*

In 1996, out of shared concern for the sensitive biodiversity of the rich Khangchendzonga mountain ecosystem, the community-based Khanchendzonga Conservation Committee (KCC) was born in Yuksam in west Sikkim. A tight, solid team of wildlife enthusiasts, community leaders, students and teachers, KCC is devoted to protecting and conserving the ecosystem with a well thought out, multi-pronged approach. They organize environmental education programmes to educate the rural

masses and the youth, the future flag bearers of the community. They also provide training, capacity building exercises and most importantly work to provide sustainable livelihoods that will make the locals less dependent on the resources of the Mt. Khangchendzonga landscape. For their undying commitment to conserve this mountain ecosystem of Sikkim, the KCC was awarded The Balipara Foundation Eastern-Himalaya Conservation Award.



Impact: 20 years of unstinted commitment to conserve the mountain ecosystem of Sikkim has created a solid pool of future flag bearers of conservation and preservice. Imparted training to more than 2000 individuals in means of sustainable livelihoods.

L. Somi Roy has taught media curatorial studies at New York University and Asian cinema at Manhattan Marymount College. He has written on film and the arts for Wide Angle, Artforum, International Documentary, Black Film Bulletin of the British Film Institute, and The Drama Review from MIT.

Roy started year-round Asian film programming at The Asia Society, and presented exhibitions of filmmakers from all over Asia. He has also curated film exhibitions for the Museum of Modern Art, Lincoln Center, Whitney Museum, Robert Flaherty Film Seminar and UCLA. His exhibitions have been seen in China, India and Indonesia. He has also curated media exhibition in public spaces, including Tibet in Times Square.



ANNUAL AWARD

This is a nominated award, presented by the Balipara Foundation Board to a government or non-government organization, whose contribution to the protection of wild nature has gone beyond the call of duty and which has displayed demonstrable success in the arena of nature conservation



Achintya Kumar Sinha Tripura

Dr. Vivek Menon, Executive Director & CEO Wildlife Trust of India & Chairman of IUCN's Asian Elephant Specialist Group presenting the award to A.K. Sinha

Achintya Kumar Sinha began his career with the Indian Forest Service when he joined the Tripura Rehabilitation and Plantation Corporation Limited (TRPC) in 1989. During his tenure at the Divisional Forest Office, Ambasa, he involved the forest staff, a local youth group and the Voluntary Health Association of Tripura to revive a patch of deforested land. This was probably Northeast

India's first ever Joint Forest Management (JFM) project, making Tripura the eighth Indian state to embrace JFM. Among his inexhaustible and notable list of his achievements are his work to rehabilitate shifting cultivators belonging to a primitive tribe, rationalizing the timber accounting system and capacity building in various

Protected Areas. For his dedicated service to India's forests, Achintya Kumar Sinha was awarded The Balipara Foundation Annual Award.

Impact: An Indian Forest Service Officer who has passionately dedicated 35 years of service for his state Tripura. Pioneered in creating India's forest ever Joint Forest Management Project which secured more than 2000 acres of Community managed forest area.



Vivek Menon

Executive Director & CEO of the Wildlife Trust of India, Vivek Menon has recently been elected as The Chairman of IUCN's Asian Elephant Specialist Group. A wildlife conservationist, environmental commentator, author and photographer with a passion for elephants, Mr. Menon has been involved in founding five environmental & conservation organizations in India.

Through his work with WTI and IFAW, Mr. Menon has pioneered the systematic development of wildlife rehabilitation and health monitoring as conservation tools within India. Working closely with the Indian government, his team has also been instrumental in establishing wildlife corridors to help connect fragmented populations of endangered species, including tigers and elephants.

SPECIAL AWARD- FOREST GUARD AWARD

This award is presented to forest staff of Forest Departments for their exemplary service towards the protection of Fauna and Flora in National parks and reserve forest of the Eastern Himalayas.

Courageous women forest guards Namita Kalita and Dharmistha Medhi Das, form a part of the second battalion of the Assam Protection Force. They have been keeping a sharp, protective eye on the rhinos and tigers in the park, checking on the crime operatives of the many armed poaching gangs that threaten the wildlife reserve. They stand, proud and able, shoulder to shoulder with their male counterparts, conducting patrols and raids day and night. They put to rest any doubts about women's abilities to contribute as much as men in protecting the very difficult grassland terrain of Kaziranga, hopefully paving the way for many more women to join their ranks.

Namita Kalita
Assam

Namita Kalita, Winner of 2015 Special Award, Forest Guards Award receiving the award from Sonam Wanchuk, Head of Wildlife & Forests, Bhutan



Posted at Ghorakati Range under Kaziranga Park, Namita has proven her mettle on several occasions braving the difficult conditions of the park. Her drive and zeal have led her to show great initiative and excellent leadership qualities. Her dedication was once again highlighted when she tirelessly engaged in rescue efforts during the floods that engulfed Kaziranga recently. For her courage and commitment, Namita Kalita was awarded The Balipara Special Award – Forest Guard Award.

Dharmistha Medhi Das
Assam

Forest Guard Dharmistha Medhi Das receiving the Forest Guards Award from Sonam Wangchuk, Head Wildlife & Forests, Bhutan

Forest Guard Award

Dharmistha Medhi Das



Dharmistha is posted in the Bonda Forest Camp under the Guwahati Wild Life Division and is sincere, brave forest guard who stands out in Kaziranga's already impressive patrolling line up. She has shown tremendous leadership qualities and presence of mind during her patrolling duties. Her contribution to conservation of the Bonda area is indispensable. For her brave and sincere service, Dharmistha Medhi Das is being awarded The Balipara Special Award – Forest Guard Award.

Sonam Wangchuk

Sonam Wangchuk is the Chief of Wildlife Conservation Division, Department of Forest and Park Services in the Royal Government of Bhutan. With over 25 years under his belt, He also oversees management works of the Convention of International Trade on Endangered Species of Flora and Fauna (CITES) in Bhutan.

Pema Thinley
Bhutan

Pema Thinley from Bhutan receiving the 2015 Forest Guards Award from Sonam Wanchuk

Pema Thinley



Pema Thinley's multifaceted contribution to conservation through his work as Range Officer in different beats in Bhutan has proven to be invaluable. He has been providing law enforcement and technical guidance to farmers and local government bodies in matters of wildlife and forestry and working to implement human-wildlife conflict mitigation measures. Today, he works as a Range Officer in Tashichholing Range of Samste, Bhutan under the Department of Forest and Park Services, Ministry of Agriculture and Forests, Thimphu. For Pema Thinley's noteworthy contribution to Bhutan's wildlife, he was conferred with The Balipara Special Award – Forest Guard Award.

Amar Sing Deka
Assam

Amar Sing Deka receiving the 2015 Forest Guards Award from Sonam Wangchuk



Courageous and fearless. These adjectives aptly describe Amar Sing Deka's 25 years of forest service in Kaziranga. Amar first joined Kaziranga National Park as a Home Guard in the late 1990s, and was almost fatally attacked by a buffalo while on duty. But, soon after recovery, he was back in Kaziranga, as a casual worker on protection duty, risking his life fighting poachers. Nothing could keep him away from his beloved park and he continues to protect it with equal zeal even today, in the capacity of a Forest Guard in Western Range, Bagori under Eastern Assam Wildlife Division. His immense knowledge of wildlife and commitment to protecting the park make him an invaluable asset. For his valiant efforts, Amar Sing Deka was awarded The Balipara Special Award – Forest Guard Award.

Rajen Panika
Assam

Rajen Panika receiving the 2015 Forest Guards Award from Sonam Wangchuk



Rajen Panika's dedication and tireless service to protection and conservation of Kaziranga has truly made a difference. He joined the Forest Department of Kaziranga National Park in December of 1992 and since then his alert and intuitive presence has helped save several rhinos from being poached. Today he serves as a Forest Guard in Kaziranga. For Rajen Panika's continued significant efforts to protect Indian rhinos, he was awarded The Balipara Special Award – Forest Guard Award.

Sontush A. Sangma
Meghalaya

Sontush A. Sangma from Garo Hills receiving the 2015 Forest Guards Award from Sonam Wangchuk



Thirty years of dedicated service to the Garo Hills of Meghalaya define Sontush A. Sangma's inspiring career and life. And over the years, his enthusiasm, passion and love for the wilds haven't waned. He joined the Meghalaya Forest Department in 1985 as a muster roll employee, and today serves as a Forest Guard of Gateman rank in the Balpakram Division, Garo Hills. He has worked on numerous beats and has faced-off with illegal loggers, militants and poachers, always maintaining a calm and steady demeanor, leading his team from the front and ensuring their safety. His name arouses respect and admiration among his colleagues and all those acquainted with him. For Sontush A. Sangma's incredible service to Meghalaya's wildlife, he was conferred with The Balipara Special Award – Forest Guard Award.

LIFETIME SERVICE AWARD

This award is for an individual whose life has been devoted to the ecological welfare of the people of the Eastern Himalayas and whose philosophy and purpose have been guided by the need to protect, restore and care of nature. A true hero; an Indian woman or man who is an inspiration to all.



B. M. Khaitan

R.S. Jhavar (Williamson Magor) receiving the Lifetime Service Award on behalf of Mr. Brij Mohan Khaitan from The Honorable Chief Secretary to Government of Assam

B.M. Khaitan, the doyen of the tea industry is known throughout the country for his ethical and moral values and philanthropic way of life. His ingenious move of acquiring tea companies in Assam when several of the big players diluted their interest in plantations, ensured that the tea estates were in safe hands, before those with short-term ulterior motives could lay their hands on them. He has always given special importance to the preservation of natural habitats in and around the tea estates and has been involved in various programmes and initiatives to conserve biodiversity of the surrounding areas. He has helped carry out several much-needed soil conservation programmes. His invaluable support extended to the Assam Valley Wildlife Society helped the Pygmy Hog and White Wood Duck conservation programmes that saw the revival of the almost disappearing populations of these species. Even today, at the age of 89 years, he shows incredible vision, zeal and enthusiasm to his work towards industry, environment, society and humanitarian issues. For B.M. Khaitan's lifetime of magnanimous efforts towards conservation, he was conferred with The Balipara Lifetime Service award.

Impact: A tea baron and a champion of environment conservation, he has helped and immensely contributed to the revival of endangered species like the pygmy hog and the white winged wood duck.



Chief Secretary (V.K. Pipersenia, IAS)

Vinod Kumar Pipersenia, Chief Secretary to the Government of Assam is an IAS of 1980 batch of Assam-Meghalaya cadre.

Mr. Pipersenias started his carrier as The Assistant Commissioner of Dhubri district. During his deputations, he has also worked with the Government of India in various ministries such as Home, Industry, Human Resource Development. He has also served as Financial Adviser in the Ministry of Human Resource Development as well as Financial Commissioner in Employees State Insurance Corporation under Ministry of labour and Employment.

2013

BALIPARA FOUNDATION AWARDS

LIST WINNERS & AWARD PRESENTERS

No	Award No	Winner	Presenter
1	The Annual Balipara Foundation Award:	Pgmy Hog Conservation Programme (PHCP) – collected by William L. R. Oliver	Mr. Jahnu Barua
2	The Balipara Foundation Naturenomics Award :	Shri Arindam Dasgupta	Ms. Nandini Dutta
3	The Balipara Foundation Green Legal Award :	Shri Gautam Uzir	Debojit Saha
4	The Balipara Foundation Eastern - Himalayan Conservation Award:	Dr. Anwaruddin Choudhury	Dr. Pratip Banerji
5	The Balipara Foundation Green Guru Award	Shri. Uttam Teron	MsSentila Yanger
6	The Balipara Foundation Young Naturalist Award :	Smt. Munjali Tokbipi	Shri Naba Kr. Das, IAS
7	The Balipara Foundation Food for the Future Award:	Shri Neelam Dutta	Mr. Bhaskar Barua
8	The Balipara Foundation Ecological Restoration Award :	Shri Jadav Payang	Prabhat Dey
9	The Balipara Foundation Nature Conservancy Award: :	Karbi Anglong Police Department.	Shri B. B. Chetri, APS.– NK Vasu, IFS
10	The Balipara Foundation Lifetime Service Award :	Anne Wright	Shri Tarun Gogoi

2014

BALIPARA FOUNDATION AWARDS

LIST WINNERS & AWARD PRESENTERS

No	Award No	Winner	Presenter
1	Nature Activist Award	Saipari Sailo	Dr. Raman Sukumar
2	Young Entrepreneur Award	Bano Haralu	Jagjeet Singh Kandal
3	Habitat Conservation Award	Tana Tapi And Takam Nabam	Ms. Belinda Wright & Mr. Ravi Singh
4	Conservation Through Innovation Award	Binod Bora	Mike Pandey
5	Young Naturalist Award	Tongam Rina	Malaya Goswami
6	Wildlife Conservation Award	Aparajita Datta	Jitesh Khosla
7	Ecological Restoration Award	Dr. Kashmira Kakati	Khagen Sarma
8	Naturenomics Award	Neihunuo Sorhie	Hemendra Kothari
9	Annual Award	Pangti Village Community & Forest Department Of Nagaland	Vijay Singh
10	Mark Shand Mahout Award 1	Mr. Kiron Rabha	Aditya Patankar
11	Mark Shand Mahout Award 2	Purna Chandra Rabha	Ms. Parbati Barua
12	Mark Shand Mahout Award 3	Bhumidhar Deka	Dr. Khune U Mar
13	Mark Shand Mahout Award 4	Sukla Das	Dr. Gautam Barua
14	Mark Shand Mahout Award 5	Mongal Ghatowal	Richard Leitch
15	Lifetime Service Award	Dasho Palijor.j. Dorji	Shri Tarun Gogoi





Conservation stories from the Eastern Himalayas

HOW LONG WILL THE ELEPHANTS SURVIVE?

How, amidst NATO's missile-defense problems in Europe, the refugee situation in the middle East & Europe, a possible nuclear Iran and the economic failings of modern nations, unemployment and inflation, can the future of the elephant be so urgent?

It is not on the radar of the media nor is it a priority for most people. The answer comes from our ability to affirm life in its moral, ethical and in its spiritual dimensions.

The elephant helped us walk out of Africa perhaps 60,000 years ago. We learned from tribal elders in east Africa that elephants, because they knew where to find water, helped humanity survive. It was alongside them that we populated the New World.

In a society fixated on growth and money, TEEB, (The Economics of Ecosystems and Biodiversity) has plainly demonstrated the irreplaceable value of biodiversity, which yearly provides trillions of dollars of value. The forests, oceans, whales and elephants of the world must now enter the balance sheet of ultimate consideration.

We have reached the point as a global civilization where we must fight for life and the meaning of life, and much of that stands in the body of the elephant and other fellow species, as well as the forests and the oceans of the world. This battle must not be lost.

Elephants are one of the pillars of existence. We must never tell nor have to tell the children -- "This is where the wild things were."

The fate of the forest elephant rests in our hands. But will it go the way of the woolly mammoth, as it is hunted for ivory and its habitat is destroyed? The Asian

elephant has suffered a 75 per cent population decline and could die out completely, researchers warn today.

An audit of elephant conservation indicates that poachers and the destruction of the creature's jungle habitat have contributed to numbers falling from 160,000 in 1950 to 40,000 now.

"Everybody is avoiding the issue. The respect and admiration for this animal is not backed up with any real action to save it. As a result of this, Asian elephants are going to fade away,"

The history of the Asian Elephant is a dismal reminder of the cruelty man can inflict on one species. This majestic being has not only been poached for his ivory tusks,

but exploited to extinction in the name of commerce. Today, in the 21st century, Asian Elephants are forced into harsh labor for trekking, begging, logging, tourist camps, zoos, circuses, captive breeding programs and display at religious temples across Vietnam, Thailand, Myanmar, Indonesia, Sri Lanka and India. For thousands of years, wild Asian Elephants have been captured from their wild habitat and turned into indentured slaves, most being used by man for war, transportation, logging, ceremonies, and construction. The popularity of circuses, festivals, shows, elephant back rides, painting, and begging are growing in countries such as Thailand, Laos, and India. Elephants which were once taught to push, pull, and lift, are now learning to beg on the streets, ride a bicycle, throw darts, play football, or paint pictures."





Today, throughout the world, including progressive western culture, Asian Elephants endure abuse, cruelty, starvation and inhumane confinement in the name of human entertainment and tourism. A January 25, 2012 article from The Nation entitled "Asian Elephants Are Being Killed for Tourist Dollars" confirms that "in many parts of Asia baby elephants are being taken out of the jungles and forests and sold to the highest bidder who will then "tame" the baby elephant into submission and induct it into a life of misery entertaining tourists. Matriarchs are being shot and so are bond members and sub-adult males still with the herd who try to protect the calves from kidnappers and poachers. Poachers, who have been interviewed, say it is common to kill up to three elephants to take one baby from the forest. Once a

few elephants are killed, the baby elephant stays close to the dead adults while the rest of the herd usually runs for safety. Poachers then have limited time to get the baby out, fearing the return of the herd and/or any witnesses attracted by the sound of gunshots."

Based on everything we know about the intelligence and complex consciousness of elephants, the abduction of elephants from their families in the wild for the purpose of human entertainment is unpardonable. As Edwin Wiek, comments," for any tourist visiting an elephant camp and riding these beautiful animals, attending a religious temple to see the elephants, or feeding elephants on the streets, the latest information has serious implications. People who ignore what is occurring effectively support the killing and torture of wild-born elephants and

their life long abuse."

Forest elephants are suffering from the same "double whammy" that claimed the woolly mammoths - habitat loss and hunting. Today both of those sides of the pinch are caused by humans. The extinction of the mammoth is a salutary lesson that applies to modern extinctions. Many experts fear that time has already run out for the forest elephant. It could be too late for the lessons we could learn from the mammoth and the mastodon to make a positive difference. We have seen some exciting initiatives like the development of national parks and landscape scale management programmes developed over the last 20 years, but the resources needed to manage these areas properly are pitiful compared to those available for resource extraction.

Is it all too late already...?

GARDEN OF THE GODS

By Panchami Manoo Ukil

Photographs by Avinash Khemka



The land blessed to receive the first kiss of dawn, the land of the rising sun, or the land of the dawn-lit mountains. Nourished by several snow-fed rivers that wind their way down from the Himalaya to form the mighty Brahmaputra river, Arunachal Pradesh is mentioned in the *Kalika Purana* in the context of the region's King Bhismak, whose beautiful daughter Rukmini was wedded to Lord Krishna.

Possibly the final frontier, the eastern-most sibling of the seven-sisters of the fabled Northeast, Arunachal Pradesh encompasses lands so pristine, so richly endowed with natural wonder, one is reminded that in its very isolation lies its magic.

In January 2015, veteran birder and close friend, Bikram Grewal and I chose to traverse the tough terrain of Mishmi Hills in Arunachal Pradesh with the help of the experienced



Straddling the Dibang Valley and Lohit districts, the lush, little-explored Mishmi Hills host diverse habitats that in turn provide sustenance to innumerable species of flora and fauna.

naturalist-birdwatcher-photographer Ranjan Kumar Das of Tinsukia, known for some pioneering bird sightings including the famed Baikal Bush Warbler. With us was Binanda Hatiboruah, a bird guide par excellence, famed for being able to “see with his ears”. Also in the team were Avinash Khemka, one of the “best-kitted bird photographers” I know, and Vaidehi Gunjal from Dharwad.

Arunachal Pradesh (26°28'–29°30'N, 91°30'–97°30'E), is known as India's richest biodiversity hotspot, and nurtures more than 5,000 species of plants, 75 species of terrestrial mammals, and over 600 (and counting) species of birds, as well as a wide variety of reptiles, and insects.

The fabled and mystical Mishmi Hills feature high on the wishlist of every birdwatcher. The best time to visit the area is end-October to mid-April. A greater part of these hills falls in the Dibang Valley district of Arunachal Pradesh, while a small portion comes under the Lohit district. The Dibang river, originating in China, is one of the key tributaries of the Brahmaputra. The Mishmi Hills at about 2,600 m., are a southward extension of the Great Himalayan Mountain Range, their northern and eastern fringes touching the China border. This complex hill system with its diverse topographical and climatic conditions has nurtured the growth of luxuriant forests with vegetation ranging from tropical evergreen, tropical semi-evergreen, sub-tropical broad-leaved, sub-tropical pine, temperate broad-leaved, temperate conifer, to sub-alpine woody shrub, alpine meadow, degraded bamboo, and grasslands.

TWITCHERS EMBARK

We landed in Mohanbari airport in Dibrugarh, India's northeastern-most commercial airport on a wet and windy afternoon. Driving through the soft rain, on roads lined by lush tea gardens and the air awash with the musky fragrance of fresh tea leaves, we reached the nearby town of Tinsukia where we halted for a couple of days of great birding in Soraipong and Dehing-Patkai, before setting forth to Mishmi.

Along the route, Avinash kept us updated on the most dismal weather forecasts, but nothing dampened our spirits. After all, we were headed to one of the most remote Meccas of birdwatching.

The drive from Tinsukia took us through iconic tea gardens and factories. A lone Lesser Adjutant was the only really significant sighting en route, until we reached the busy Saikhowa Ghat. Here, Scorpio four-wheel-drive in tow, we found ourselves being ferried across the Lohit river. Construction work on the Sadiya Bridge over the Brahmaputra was still in progress. When completed, the bridge will link NH-37 in Assam to NH-52 in Arunachal Pradesh, reducing transit time from six to two hours. Hot breakfast at a local makeshift eatery downed, and an adventurous ferry ride taken, we disembarked at Sadiya Ghat, on the opposite bank, and continued on our drive towards Arunachal Pradesh. We were in one of the most exquisite areas on the planet, festooned with bunches of hanging orchid blooms, coral trees laden with flowers, with the landscape studded by quaint thatch and wood village homes raised on stilts.

An exultant 'lifer' that presented itself to us just as we emerged from the bumpy ghat stretch was the *affinis* race of the Indian Roller. Two hours later, at the Shantipur check-post, armed with our Inner Line Permits we drove on and got our first glimpse of the fabled Mishmi Hills rising majestically amidst the clouds, and looking every bit as verdant as we had imagined.



The Mishmi Wren Babbler was only known from a single specimen collected in 1947 until it was rediscovered in its namesake hills in 2004.

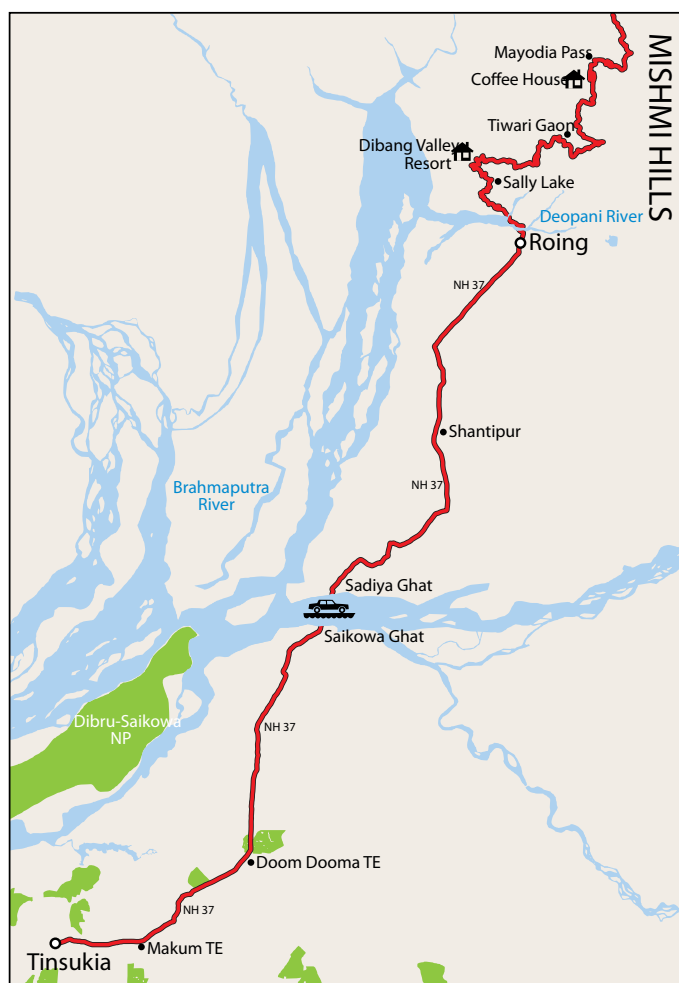
About 20 km. later we reached Roing, the headquarters of the Lower Dibang Valley District and the last post to refuel the vehicles, and stock up on provisions. A vegetable *haat*, some bakeries, a roadside *bhel* stall and grocery shops owned by Marwari traders who have been here for generations were the key pit-stops. One *Idu-Mishmi* lady, possibly struck by Bikram's charming ways even offered us some of the fiery *bhoot-jolkias* gratis! Our jeeps now brimming over, we moved towards the Dibang Valley Jungle Camp for a scheduled stopover for the night.

The Mishmi Hills are a mélange of muted shades in April, the bright flashes of colours coming from the many birds that are readying themselves for the breeding season. The hill forests exude a feeling of richness and prosperity of habitats in terms of the abundance of flora, fauna, and vegetation. Yet, there are some discordant notes in the form of expressionless, gun-toting youngsters whizzing past on motorcycles, with bear and other skins tied to the rear of their bikes. The nonchalance depicted by these youngsters supports the view that hunting is an accepted way of life in these regions. A study by Ambika Aiyadurai (*Indian Birds* Vol. 7 No. 5) reveals that the feathers of the rare Sclater's Monal are used by priests to make hand-fans, and pheasant-feather fans are regularly used in *Mishmi* tribal households. While traps are used for ground-dwelling birds and small mammals, shotguns and double-barreled guns procured from the open market with government-issued licenses are used for hunting distant targets. With its long traditions of tribal hunting, the Northeast is extremely vulnerable to depleting numbers of birds and mammals. However, we have also seen some path-breaking exercises in conservation in the region like the protection of Amur Falcons in Nagaland. Hopefully governments, non-government agencies, and conservationists will sooner than later take up the issue of hunting in these fragile regions as well, by educating the local population, especially the youth, and recalibrating their perspectives about the ecological suicide that they are perpetuating through hunting.

BIG BIRD DAY

The drive offered breathtaking views of the boulder-strewn bed of the Deopani river, and a small detour led us to the Sally Lake, a small emerald waterbody ensconced within thick forests. Tarrying awhile, we spotted a Lesser Yellownappe and Rufous Woodpecker knocking on wood, with myriad warblers, a Green-tailed Sunbird, and a Verditer Flycatcher flitting from branch to branch. Meanwhile, calls of Great Barbets provided an ongoing, lyrical backscore to the ethereal ambience. Having breakfasted in these serene surroundings, we resumed our journey towards the Dibang Valley Jungle Camp that would serve as camp. Set amidst acres of orange orchards with stunning views of the hill ranges, all of us looked approvingly at the cottages on stilts that would be home for the night. A quick cuppa and we were off, exploring, just outside the campus, where we promptly sighted a pair of Rufous-necked Laughingthrushes darting about the 'orangery'. Bird activity dulled with the onset of dusk, but we had another plan in place. We drove higher to try and spot the elusive and rare Hodgson's Frogmouth. A brief wait, silence and then the sound of fluttering wings in the darkness and we were gifted with the sight of a female that had descended to perch before us at eye level! Our trip had started well, with our wish list beginning to be fulfilled!

The stretch of road outside the camp was a palette of shaded greens, from the fluorescent and almost interwoven waist-high ferns that lined the roads, to the deep emerald of the tall trees. Rich in birdlife, the valley unfolded the legendary mixed-hunting flocks including a huge one of the rarely seen Grey-headed Parrotbills. A pair of Beautiful Sibilas kept us enchanted, but it was a pair of Hill Blue-flycatchers that got our adrenaline pumping the moment we caught sight of them. Among the rarest and most coveted of flycatchers, these birds inhabit only a small stretch of this road. Mercifully, the weather held and none of the gloomy forecasts manifested. We encountered *mithuns*, the famed bovines endemic to the Northeast, grazing on the roadside vegetation, and eastern hoolock gibbons howled as they swung from tree to tree. Post-lunch we drove up to the tiny hamlet of Tewarigaon. On the way we stopped to observe still more mixed flocks in the canopy... including yuhinas, mesias, fulvettas, minlas, barwings, Grey-chinned Minivets, Yellow-cheeked Tits, Grey-headed and Grey-cheeked Warblers, and Cutias. A Grey-bellied Tesia on ground was so close that I missed photographing it from sheer shock and awe, earning me the sobriquet "out-of-focus-queen"! Spotted, Blue-winged and Black-faced Laughingthrushes were about, but not clearly seen. Golden-throated and Blue-throated Barbets, were among other highlights. A little further up we were treated to the glorious sight of a pair of Beautiful Nuthatches that clambered up branches and then hung down as they hunted in the moss. Yet another coveted lifer! Amidst this frantic birdwatching, we also had some spectacular sightings of hoary-bellied, orange-bellied and three-striped squirrels, plus a sole yellow-throated marten. All of us by now suffered pains in our neck, with all the vertical viewing and the heavy camera gear. Our feet too were uniformly weary from walking. We took a much-welcome break at Didi's shack in Tewarigaon, the only pit-stop on this stretch, before



MAP NOT TO SCALE. BORDERS NEITHER AUTHENTICATED NOR VERIFIED



continuing our climb towards the Mayodia Pass. Most of the stretches of the road were devoid of humans and vehicles save for the occasional Border Roads Organisation truck.

MORE BIRDING

By now it was perceptibly cooler as we continued along our ascent. We saw several Himalayan Buzzards riding the thermals and a lone, female, Common Kestrel. A little ahead we saw an elusive Rufous-bellied Eagle making languorous sorties over the hills. Wren-babblers, of course, made their presence felt loud and clear from within roadside bushes.

We really wanted to test our luck by looking out for the Ward's Trogon, named after Frank Kingdon-Ward, the famous botanist and explorer who surveyed these parts along with biodiverse expanses of China, Tibet, Burma and Assam for over four adventurous decades. We knew that this enigmatic trogon of the hills was most likely to be spotted half-concealed in lush cloud forests. But we had unbelievable luck. An hour-long wait at the end of a road finally saw one of the birds fly downhill in fits and starts, until it came to perch above us, in the open, framed by a most picturesque background of pinkish-orange leaves and hanging mosses.

It was a sub-adult male in orange-yellow plumage with that striking blue eye-ring that makes the trogon so special. We could hardly have asked for a more auspicious start to our stint at Mayodia. Tired, but happy, we called it a day and checked into the mis-named Mayodia Coffee House of 'basic amenities'



TOP An unexpected clear sighting of a sub-adult Ward's Trogon, usually found in thick forest, was an auspicious start to the birding in Mayodia.

ABOVE Common, but striking, a Black-eared Shrike-babbler calls out from its perch.

fame. We all agreed it would have been better described as 'lacking in' basic amenities, but we were there for the birds and nothing else mattered.

After checking in we took a short drive up beyond the Coffee House to the 'mobile signal point' near a quaint temple constructed by the Border Roads Organisation. On the way back, a huge Himalayan black bear ran across the road and disappeared into the valley, reminding us of the incredible wilderness that we were privileged to be experiencing! After listing the day's sightings and a basic dinner, we crashed for the night, knowing that we had the promise of more great birding ahead of us.

The Blyth's Tragopan was our first target of the morning, but even a long, crouching, pre-dawn, very cold wait, threw up no sighting, though we kept hearing its melancholic yearning calls from the ravines. We did, however, see a Darjeeling Woodpecker and a pair of Grey-sided Laughingthrushes, and other primary species including the Rusty-throated Wren-babbler, also called the Mishmi Wren-babbler, whose distribution is confined only to the hills around Mishmi.

This enigmatic, petite, nine-centimetre avian was presumed extinct for 54 years until, in 2006, Ben King and Julian Donahue, 'rediscovered' it. We kept hearing the bird's call but were denied a sighting, until a solitary bird suddenly hopped out to perch on a twig in the open. A beautiful apparition in charcoal with a bright rusty neckline and streaked head, the bird sat and called while we watched and photographed it. Our hearts full with the 'namesake' bird, we then looked out for the other wren babblers which proved to be considerably more elusive, offering short glimpses from within dense bushes.

Manipur Fulvettas, on the other hand, were a friendly lot. We saw several more mixed hunting flocks of barwings, Golden Babblers, Golden-breasted Fulvettas, Black-throated Parrotbills, warblers, and sunbirds, plus the briefest of brief sighting of the near-mythical Blyth's Tragopan, skulking about in the dense foliage.

A LIFER

Post-lunch, we chose to focus efforts on the elusive Wren-babblers that we had missed earlier. But they stayed elusive. Nonetheless, a Golden-throated Barbet offered us some pleasurable moments, perched conveniently in good light that enabled us to take quite a few photographs. Above us Eurasian Sparrowhawks hovered. Just before day's end, co-birder Vaidehi Gunjal spotted a bird flying close to our vehicles. Lady Luck smiled on us – it was the Green Cochoa, one of the rarest birds, and a sighting on which we had hardly pinned any hope. It was even a lifer for Bikram and that made all of us very happy. The bird put up an open-winged display as it flew low past our vehicles and disappeared into the valley, calling out incessantly thereafter. We celebrated with a sumptuous and authentic Oriya dinner by candlelight, prepared by the two Odisha birders!

With a prayer of gratitude to the weather gods, we began our downhill drive the next morning, adding several exciting sightings to our bird list along the way. After a hugely adventurous shortcut across the Chipu river, we reached Sadiya Ghat by noon. It was the ferry-crossing again that marked the end of an unforgettable and very satisfying birding trip to the Mishmi Hills.

We promised to return, inspired by Frank Kingdon-Ward who had written earlier: *"The paradox of exploration is that as the field narrows, the objects in the field expand to infinity. If, then, the pioneer has had his day, for the specialist it is only the breaking of the dawn."* 🦋



Panchami Manoo Ukil is a nature lover and bird enthusiast from Bhubaneswar, Odisha. She is the founder of The Bhubaneswar Bird Walks. She conducts a bird walk every Sunday morning in the city and its outskirts to document avian species.

MY TOP TEN BIRDING DESTINATIONS IN INDIA

Mishmi Hills, Arunachal Pradesh: Blyth's Tragopan, Ward's Trogon, Green Cochoa, Hodgson's Frogmouth, Wren-babblers.

Maguri Beel and Soraipung, Tinsukia, Assam: Black-breasted Parrotbill, Baikal Bush-Warbler, White-winged Wood Duck.

Saat Taal and Pangot, Uttarakhand: Cheer and Koklass Pheasants.

Western Ghats, Maharashtra: Oriental Dwarf Kingfisher, Blue-eared Kingfisher, Western Ghat endemics.

Tal Chhapar Wildlife Sanctuary, Rajasthan: Harrier congregation in September-October, Spotted Creeper, Sociable Lapwing, Red-tailed Wheatear.

Dr. Sálím Ali Bird Sanctuary, Thattakad, Kerala: Bay Owl, Sri Lankan Frogmouth, Black Baza.

Little Rann of Kutchh, Gujarat: Peregrine Falcon, Greater Hoopoe Lark.

Bhitarkanika National Park, Odisha: Seven species of kingfishers, Mangrove Pitta, a wide variety of passerines and winter migrants make this my most favourite birding destination.

Mangalajodi Wetlands, Odisha: Ruddy-breasted Crake, Baillon's Crake, Slaty-breasted Rail and winter migrants and waders from extremely close range.

Ekamra Kanan, RPRC, Bhubaneswar, Odisha: Pale-capped Pigeon.

The gorgeous, aptly-named Silver-eared Mesia is found across Southeast Asia. It nests near ground level, and both parents take turns to incubate the eggs.



NOTHING VENTURED, NOTHING GAINED

In October 2012, stark photographic and video evidence of fishermen training their fishing nets to the sky to trap thousands of migratory Amur Falcons stunned the world of conservation. With three others, I was able to document this 'dark harvest' around the Doyang Reservoir in Nagaland's Wokha district. On that trip we estimated 1,40,000 birds being exterminated between October and early December every year. The shrill cry of the captured birds echoed in my ears while the sheer numbers spelt disaster before my eyes. The encounter jarred my senses and my understanding of the Naga community. Local hunters would later tell us that our figures were an insult and that the truth was far uglier – more than double our estimates!

As we documented the spoils of one hunter after another, my mind raced. How on earth were we to tell this story and follow it through? Nobody likes to be told they are wrong, more so with hard evidence to prove their culpability. With hunting upheld as a traditional right in Nagaland, I was sure we would face a storm of opposition, maybe even violence! It was soon time to face my fears following the media blitzkrieg; 'Massacre of the Amur Falcons' on www.conservationindia.org by Ramki Sreenivasan and Shashank Dalvi in whose company I unearthed this horror.

I found myself attending a meeting organised by the Forest Department in the heart of the 'killing fields'. I was easily the unhappiest person in the room, full of village elders and community leaders. My anxieties were misplaced. Not one person in the room questioned the story in the newspapers.



Instead they wanted to know what we felt was wrong in hunting birds that they regarded as 'manna' from heaven! My sympathies that afternoon were with the forest officer. He faced a barrage of angry villagers, incensed by elephants destroying their paddy fields and inadequate compensation. The flight of the Amur Falcon paled by comparison.

The questions and doubts raised at a series of such meetings resulted in one of the most successful campaigns to be launched in India in decades. 'Friends of the Amur Falcon' was born from such community consultations and the primary strategy we employed was to educate children on issues relating to nature conservation and its benefits on the quality of their own lives. We have just about 100 children enrolled in five eco-clubs, one in each selected village. In a show of solidarity, four credible organisations joined hands in the mission in 2013 – Wildlife Conservation Society, Raptor Research & Conservation Foundation, Bombay Natural History Society and Wildlife Conservation Trust.

In under a year of the exposé and roughly six weeks before the

migrating falcons flew in from Mongolia (enroute to South Africa), the village councils of Pangti, Sungro and Aasha imposed a ban on hunting Amur Falcons. For the first time in 10 years the birds would be guaranteed safe passage over what is now recognised as the world's largest Amur Falcon roosting site!

I am often asked what influenced the village council to impose the ban. How could the government overlook this scale of hunting that had gone on for decades? I have no answers. It really seemed like the timing of our visit, the impact of the report, the response of the village council and the willingness of the hunters to give conservation a chance, was orchestrated by a mightier force.

Bano Haralu is a pioneering television journalist of Northeast India. After two decades of reporting, she returned to Nagaland in 2010 to work for nature conservation. She formed the Nagaland Wildlife & Biodiversity Conservation Trust in 2013 and serves as its Managing Trustee.

ELEPHANT GARDENERS

Mayukh Chatterjee



Just as Elephants need their forest, the forest needs them. Dr Blake, researcher with the Mac Planck Institute for Ornithology, describes the elephants as “mega-gardeners”. The researcher and his colleagues spent several months camping in the dense forests tracking the elephants. He has found that, during their lumbering treks, forest elephants can vacuum up hundreds of pieces of fruit from under a single tree.

They then deposit the seeds they have eaten with a generous helping of fertiliser - in the guise of elephant dung - throughout the forest. Another side effect of their fruit-rich diet is that they probably defecate around 17 times per day.

“Almost every pile of elephant dung contains viable seeds from up to 16 different plant species and thousands of individual seeds,” says Dr Blake. “Tropical forests are so diverse that a seed that lands near its parent plant has a suite of seed predators

According to researcher, Trevor Caughlin, trees produce millions of seeds and only one of them needs to successfully make it into the ground for a new sapling to grow.

and pathogens waiting to nab it,” he explains. “So if you’re a seed and you land under your parent, the probability of you surviving is almost zero.” Forest elephants, however, can take seeds several kilometers from their parent plant. “It’s like the parable from the bible - some seeds will land on

stony ground, some on poor soil, but some will land on good soil...

“With lots of elephants roaming the forests, at least some seeds are likely to land in the right place to grow,” says Dr Blake.

And a myriad of other species depend on the structure of the forest that the elephants create. “Insects, mosses, lichens, invertebrates, other vertebrates; a whole gamut of animal, plant and fungal species are specific to certain trees or plants,” explains Dr Blake.

“If we lose elephants, we’re going to lose those trees; forest biodiversity as a whole is going to diminish.”

A recent study published in Proceedings of the Royal Society B, found that there is a stark correlation between lower elephant populations and less trees. Elephants are regarded as the architects of their environments for their ability to

influence the local vegetation. In fact it has been said that after humans, elephants have the largest ability to influence their natural environments.

The findings of the Proceedings study show that the trees that are popularly found in traditional elephant habitats have become reliant on these animals for seed dispersal. According to researcher, Trevor Caughlin, trees produce millions of seeds and only one of them needs to successfully make it into the ground for a new sapling to grow. But, researchers found that the method of dispersal played a great role not only in the chances that this would occur, but also the future health of the tree. Looking at tree data from an area in Thailand where elephant populations used to number in the 100,000s, and have now been reduced down to around 2,000, it became apparent that trees planted via elephant-mediated dispersal have a much better shot at survival.

What is most troubling about the researcher's findings is that in areas where elephants are becoming extinct, so are local species of trees. So, in a nutshell ... if the elephants are going extinct, they're going to take the trees with them.

Trees play a vital role in preventing soil erosion. In areas that are prone to either flooding or drought, trees help to lock the soil in place, basically holding the entire habitat in place. When soil runs into rivers it can cause them to dry up – meaning the loss of major water supplies and also homes and

croplands.

The Food and Agriculture Organization of the United Nations even goes as far as to assert that soil erosion in and of itself can destroy an entire civilization. The survival of the elephant is precarious, but the survival of the one billion people who live in regions that are already threatened by water scarcity and degrading environmental conditions from soil erosion will also be put at high risk.

A healthy elephant population means a healthy environment which in turn benefits people.

The ivory trade and tourism industry may be highly profitable endeavors, but it is clear that what they cost to the environment hardly makes them worth the pay off.

The resilience of an ecosystem relies on the delicate balance of all species. By removing the elephant from the equation for our personal gains, we are ultimately tipping the balance away from our own favor. Now that the direct correlation between the elephant and forests has been drawn, conservationists hope to spread the message that “guns kill trees too.”



Panjit Basumatary

“If we lose elephants, we’re going to lose those trees; forest biodiversity as a whole is going to diminish.”



HOPE FLOATS

The world's last remaining population of brow-antlered deer is confined to a few square kilometres of floating habitat in Manipur's Loktak Lake. Endemic and endangered, the sangai needs managerial interventions. **Cara Tejpal** travels to Manipur in the company of experts to plot the deer's future.

Dr. A.J.T. Johnsingh leans across his colleague Professor Mewa Singh to peer at me. "You know," he says, "When a pack of dholes bring down a stag in velvet, they crunch up its antlers like they're biscuits." Having delivered this piece of trivia he settles back down in his seat and waits as I fumble for an appropriate response. Around us, a platoon's worth of gun-wielding security personnel pace the temporary but beautiful conference hall at the Institute of Bioresources and Sustainable Development (IBSD), where we await the arrival of Okram Ibobi Singh, the Chief Minister of Manipur.

It's a pleasant April morning in Imphal, and I am here on the invitation of the institute to attend a national workshop on the conservation of a benign ungulate species known as the brow-antlered deer or sangai. Just an hour's drive from IBSD, confined to a wretchedly small parcel of unique habitat, lives the last remaining population of these deer in the world. Here, in the 40 sq. km. Keibul Lamjao National Park, this sub-species of Eld's deer *Rucervus eldii eldii* quietly persists even as the threats around them steadily close in. A critically endangered, endemic, large mammal,

you would expect the sangai to feature on the priority list of every government and non-governmental wildlife agency worth its salt, but the species has been largely ignored for decades, overlooked in favour of rhinos, bustards, tigers, elephants and other less endangered but more 'charismatic' animals.

Yet one 'Lone Ranger' has, for close to 40 years, consistently extended a lifeline to the species, while awaiting the awakening of authorities to its perilous status. Dr. M.K. Ranjitsinh hopes that today is that day. In the very first session of the workshop he critiques the population figure proposed by the

What makes the sangai so vulnerable is that it is a habitat specialist. They live exclusively on floating islands of decaying biomass and growing vegetation, known as phumdis, on one end of Manipur's Loktak Lake, separated from it by a mere strip of land.

state. His voice booms across the room, "Please underestimate the population!" he urges. "Ground surveys are not completely accurate. It is better that we err on the side of caution."

Ranjitsinhji has good reason to worry. In 1975, it was he, as India's Director of Wildlife that boarded a helicopter to conduct an aerial survey of Keibul Lamjao and in doing so discovered that poaching and habitat destruction had decimated sangai populations. Only 14 animals remained on earth. Subsequently, the national park was notified, the sangai received much-needed attention, and slowly made a recovery to its present numbers. But then it rapidly faded from conservation discourse. Back in the 70s, the situation was dire, but the threats were more manageable. Today, while the sangai population has risen to just over 200 individuals, the threats have diversified and evolved in complexity.

What makes the sangai so vulnerable is that it is a habitat specialist. They live exclusively on floating islands of decaying biomass and growing vegetation, known as *phumdis*, on one end of Manipur's Loktak Lake, separated from it by a mere strip of land. It is into this lake that the untreated sewage from Imphal city drains. And it is this lake whose hydrology is subject to a game of Russian roulette by the Ithai barrage of the 105 MW Loktak-hydroelectric project ("Is the only purpose of water to provide electricity?" asks Ranjitsinh) that dictates its water levels and therefore the strength of the *phumdis*. It is this lake that is being choked by illegal reclamation. And it is this very lake on which a growing number of Manipuris depend for both fish and wild vegetation.

In the course of her research on the people-park dynamic of Keibul Lamjao in 2008, Dr. Ruchi Badola, a scientist with the Wildlife Institute of India, found that 58 per cent of the people who used the park's resources were entirely dependent on it for their livelihood and that there was a 40 per cent overlap in

the preferred vegetation extracted by the people and deer.

If these stifling anthropogenic pressures were not enough, the sangai, unlike other endangered species, has not even been afforded the luxury of a safety net in the form of a healthy captive population, or a second home. Somewhere along the way of a series of transfers of four deer from the wild to the Kolkata zoo, to the Delhi zoo and back to the Manipur zoo, it is thought that they were crossed with another sub-species of Eld's deer known as the thamin, native to Myanmar and Thailand. With suspicions rife that the existing captive population of sangai is of 'mixed' descent and that too from a miniscule gene pool of just four deer, release into the wild is out of the question. An authority on the captive management of wild animals and a professor with the University of Mysore Prof. Mewa Singh agrees, "Most zoo-bred deer suffer tuberculosis. Our zoos aren't able to keep them free from pathogens and management practices are, for the most part, abysmal. Captive breeding is a science that India has not yet perfected."

But Dr. G Umapathy, a senior scientist with the Hyderabad-based Laboratory for the Conservation of Endangered Species (LaCONES), is more optimistic. Exploring the next frontier in wildlife conservation – conservation physiology, he is brimming with energy as he speeds through his talk, promising that in his laboratory he can unlock infinite secrets from animal faeces. A few samples from the captive sangai are all he needs to determine their 'purity' and ex-situ conservation is not out of the question. "Globally, 19 species, of which seven were extinct in the wild, have been successfully reintroduced," he asserts. It seems that solutions do exist.

The next morning, I find myself in a traditional canoe, being steered by a forest guard through the narrow water channels of Keibul Lamjao. Sitting uncomfortably behind me, umbrella flowering above his head in defense against a persistent drizzle, is Professor Dinabandhu Sahoo, the Director of IBSD. Six months ago when he arrived in Imphal, Prof. Sahoo had never heard of a sangai. As the craft brushes against the surrounding *phumdis* and lurches alarmingly with every pull of the guard's bamboo pole, Prof. Sahoo laughs in self deprecation,



FACING PAGE The unmistakable u-shaped antlers of the sangai stag give it its common name - the brow-antlered deer.

ABOVE The participants of the 'National Workshop on the Conservation and Sustainable Management of the Sangai' pose for a group photo.

COURTESY: INSTITUTE OF BIORESOURCES AND SUSTAINABLE DEVELOPMENT

"They celebrate the Sangai Festival in Imphal. It's not about conservation, but it is named after the deer. When I first heard about it, I thought it was called the Shanghai festival and wondered why we were celebrating a Chinese city! When I finally found out that the sangai was an endemic, endangered species, I conceptualised the workshop and decided that it was time to get things moving."

The Sangai Festival isn't the only thing to have derived its name from this unassuming deer. The newspaper delivered to my hotel room that morning was titled *The Sangai Express*, and scattered across Manipur are towns and villages with names like Sangaikot, Sangaithel and Sangaiprou. The people indisputably share a close bond with the sangai, a fact that reflects brightly in the data collected by, you best believe it, Dr. Sanggai Leima who completed her Ph.D. under the guidance of Dr. Badola. Each member of the 249 households that she surveyed around the national park agreed that protected area status was necessary for the conservation of the deer and a surprising 70 per cent agreed that resource extraction should be controlled.

When we alight from our canoes to begin our ascent to the top of Pabot Hill from where we hope to glimpse the brown-antlered deer, I get the distinct feeling that we are on *terra 'unfirma'*. With each step my feet sink a few inches into the ground and my shoes fill with water. The experience greatly increases my respect for the hooves and gait that the sangai have evolved to allow them unhindered movement on their floating homes and that has given them the epithet, 'the dancing deer'.

In theory, conserving the sangai and its habitat should be profoundly easy. Preserving 40 sq. km. of land and lake are not much to ask for the survival of an entire species, but the stakeholders are so many and so disconnected from one another that in practice sangai conservation is daunting. Between the Forest Department, independent researchers, scientists, the Loktak Lake Authority, local villagers, the National Hydroelectric Power Corporation and the IBSD, suggestions are plentiful, but a concerted strategy is yet to materialise. Incredibly, where the tiger and elephant have become money-spinners through tourism, the sangai receive no more than half-a-dozen

DEER COUSINS

Like the sangai, Kashmir's red deer, the hangul, is today restricted to a single, persecuted population in the Dachigam National Park. The 200 odd hangul that remain, face stiff competition from a state-run sheep farm for rights over their grazing meadows. This sheep farm has been illegally operating inside Dachigam since 1978, despite repeated directives from the Chief Minister's office to clear out of the National Park.

The hardground barasingha or swamp deer on the other hand is making a hesitant recovery. In the 1960s, a single population of 66 deer in the Kanha National Park was all that remained. But today, thanks to the determination of good wildlife managers, their numbers have rebounded and seven individuals have been translocated to a new home in the Van Vihar National Park in the interest of maintaining a second, viable population of the species.

visitors a year. An astonishing fact when you consider that they are the last of their kind, persisting on truly one of the most unique landscapes that I have yet had the privilege to visit.

From the top of the hill, the *phumdis* fan out around us like an expansive watercolour. With the ominous grey dome of the sky above us, and the canoes bobbing lazily in the distance, the scene is dramatic. Patiently we wait, and our virtue is rewarded. Amidst gasps of delight a participant's keen eye spots a hind with a young one – two chocolate smears against the jade grass. Ten minutes later on another *phumdi*, a stag appears. Handsome and dignified, it halts in a clearing and turns its impressive U-shaped antlers towards us. It is then that I am hit with the overwhelming knowledge that I am one of just a handful of people to have actually seen a sangai deer in the wild. Sighting a sangai has none of the adrenalin or thrill associated with big cat spotting, rather a simple acknowledgment that the world belongs as rightfully to this stag as it does to you or me.

Even within Keibul Lamjao, the sangai population is limited. Research conducted in the park by Dr. Syed Hussain of the Wildlife Institute of India revealed that only 23 sq. km. of the protected *phumdis* are thick enough to sustain the weight of the sangai, and even so, just eight square kilometres are consistently inhabited by them. The decline of the *phumdis* due to the changing hydrology of the park is a key talking point in the course of the workshop. The reducing thickness and fragmentation of the biomass could mean that one day soon, these floating

meadows will be unable to support the weight of their most precious ward.

As we return to Imphal, we make a pit stop at the side of the road to look out at the populated eastern end of the Loktak Lake. Like a vast, watery acupuncture patient it stretches as far as the eye can see. The surface of the water is peppered with bamboo poles to form *athaphums*, an ingenious local fishing tactic. Picturesque, floating hutments crowd the waters and Prof. Sahoo estimates their number at 1,000 and growing. More huts can only mean more people, and more people can only mean more pressure on the lake and its resources.

Manipur has done a commendable job thus far. For 40 years, with negligible support from outside, the state has somehow managed to secure this tiny population, but current conservation initiatives seem to have stagnated much like the lake. Those who share space with the sangai have been given no incentive to support conservation. Their remarkable tolerance is a product of their own cultural integrity. If Manipur is to save its state animal, it will have to find the political and scientific will to formulate and implement a management plan beyond the tired rhetoric of conference halls. If not, all that will be left for the next generation will be newspapers and towns named for the sangai – hollow tributes to a defeated species. 🦌



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A tusk-less future for the asian elephant

Picture the Asian elephant without its elegant tusks. Ecological scientists filming the pachyderms for months together at the Kaziranga National Park in the north-east Indian state of Assam say this picture might become a reality in a few thousand years from now. The reasons, they figure, are two-fold. One, tusks are merely ornamental, not of much use to the animal and thus dispensable. And two, poaching pressures are rendering more and more elephants toothless.

Analysing over 450 hours of video footage of Asian elephants,

Karpagam Chelliah and Raman Sukumar from the Centre for Ecological Sciences at the Indian Institute of Science, Bangalore, conclude that the magnificent beasts might adapt and evolve into becoming tusk-less creatures in times to come.

The duo set out to study the most important factors that determine the winner in a duel between two male elephants. They considered parameters such as body size, tusk and 'musth' (an annual period of heightened aggressiveness and sexual activity in male elephants).

Elephant tusks are elongated upper

incisor teeth. In Asian elephants (*Elephas maximus*), females do not have tusks. Among males, some have tusks and some don't (called makhnas). The number of makhnas vary between populations, from just five per hundred in some to more than 95 per hundred in others. Over three years (2008-2011), the researchers spent 458 days in Kaziranga video-taping and documenting elephant behavior. They then isolated 116 instances where males interacted, and sometimes sparred, with each other.

When they examined who won these jousts, the results were categorical. Musth males always won tussles. The second most important factor for a winning male was his size, just like in





African elephants. They found that whether a male had tusks or not was least important.

Out of 86 interactions between males, musth ones won an incredible 84 times (a 98% success rate). On the other hand, out of 82 times when one male had a tusk advantage, the tusker won only

54 times (a 66% success rate). Tuskers lost to both musth males and larger males.

The tensile strength of the Asian elephant tusk is surprisingly low — some species of bamboo have double the tensile strength of such ivory. Elephants can easily snap bamboo with their trunk and body

weight, and it is possible they can do the same with an opponent's tusks. "I have seen makhnas grab the tusks of a tusker and push," says Chelliah.

The status of tusks, was therefore, found to be "at the bottom of the hierarchy of male-male signals" and thus could facilitate rapid



evolution of tuskless males in the population under artificial selection against tusked elephants increasingly poached for ivory. It may so happen that tusked males are entirely wiped out from the region and replaced with makhnas, the researchers say.

“It would be interesting to examine

whether the high proportion of tuskless adult male elephants in northeastern India is a consequence of artificial selection imposed upon a system of signals in male-male combat in which musth and body size override the advantage of possessing tusks,” the authors write in their paper.

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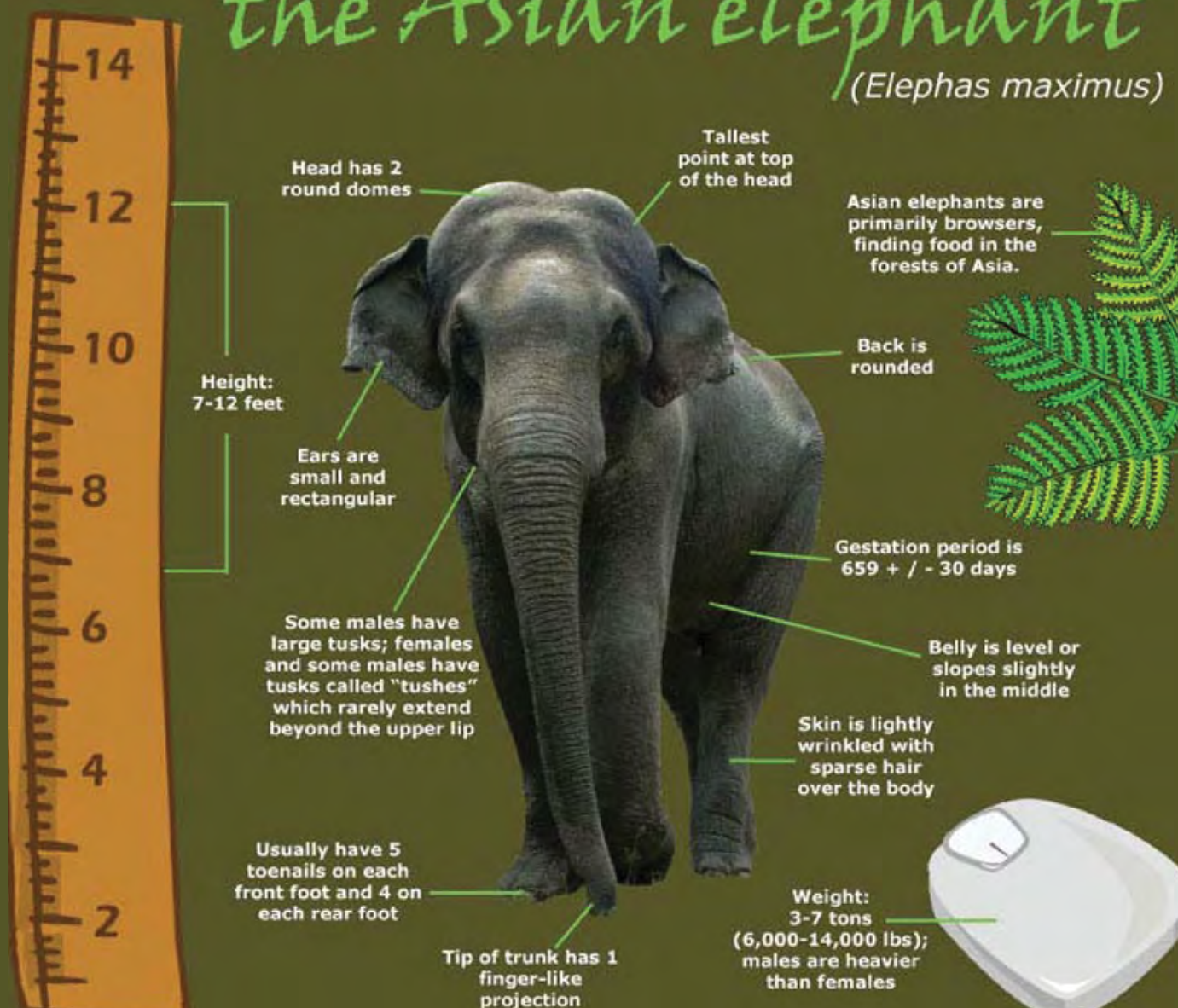
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Getting to Know...

the Asian elephant

(*Elephas maximus*)





Fun Facts

Asian elephants can tear down trees or pick up a blade of grass with their trunks.

Elephants have the largest brain of any land mammal. In fact, of all land mammals, they have the greatest volume of cerebral cortex available for cognitive processing.

An elephant's trunk has more than 40,000 muscles, more than all the muscles in a human body! Asian elephants have a gestation period of almost 22 months—the longest of any animal. Calves often nurse for two to four years.

Asian elephants communicate via rumbles, bellows, and moans. They also emit low-frequency infrasound that can travel several miles.

Along with dolphins and great apes, Asian elephants are the only animals known to recognize themselves in a mirror.

Elephants' closest living relatives: hyrax, sea cows, golden moles

Can ingest over 100 liters (26 gallons) at one time

Drink up to 225 liters (59 gallons) per day

Anecdotal evidence reports elephants fond of alcohol; reports of raiding illicit liquor stores in the forest.

Adults eat approx. 150kg (330 lbs) daily; approximately 1.5 – 2% (dry weight) of body weight

Female elephant herds spend 70-90% of time feeding.

Male activity shows one peak at around 8 am and another between 4-5 pm. Female herds peak around 10 am and then later between 3:30 and 6 pm.

In a study at Ceylon's Wilpattu National Park for individuals described as secretive and shy

Feeding is intermittent during 24 hour period

Drinking is typically early evening and just before daybreak

Long distance travel usually accomplished at night

Elephant charge: up to 40 km/hr (25mph)

Normal walking speed 2.5-3.7 mph (4-6 km/hr). Charging speed can reach 15.2 mph (6.8 meters/sec) (Hutchinson 2006)

Can not jump; even a shallow ditch poses a barrier

Swim readily at rate of 1.3 mph (2 km/hr). Can stay afloat for up to 6 hours and cover distances of 30 miles (48 km) at a stretch



Naturenomics™ initiative

Rangan Dutta | 14 December, 2015

At a function last month in Guwahati, the 2015 Balipara Foundation Awards were given to seven conservation activists in diverse fields and three community-based organizations like the Panchan Lakhar Community Conserved Area Management Committee (Arunachal Pradesh), Khanchendzonga Conservation Committee (Sikkim) and the Bicone Bio-diversity and Nature Conservation Network (Mizoram) for their “inspirational conservation work” and successful efforts to protect wildlife, restore deforested land to biodiversity rich forest status, promote organic farming as a measure of sustainable food security and replace agro-chemical inputs and energy security through the spread of renewable energy systems in villages.

Six, including two women from Assam, Bhutan and Meghalaya, received Forest Guards Awards for their “tireless service to protection and conservation at wildlife sanctuaries”, often at great risk to their lives.

The individual awardees included K M Bujarbaruah, director of the Indian Council of Agricultural Research complex for the North-east hill areas, for introducing organic farming as “food for the future”; internationally-renowned environment lawyer and activist Ritwick Dutta, Achintya Sinha for reviving deforested land in Tripura and Nimesh Ved for securing an elephant corridor in Meghalaya’s Balpakram National Park.

The remarkable work of Thingnam Girija of Manipur in creating a “one of its kind” website — www.flowersofindia.net to showcase India’s floral heritage and which has brought flower enthusiasts all over India under this forum — earned her the “Young Naturalist” award.

The inclusion of Bhutan in its scheme reflects the international dimension of the foundation’s work embodied in its clear emphasis that the eastern Himalayas is an integrated geophysical and climatic region and hence its conservation requires concerted efforts by all stakeholders across political boundaries.

This vision of the Balipara Foundation is bold and is in resonance with the spirit of the recent Paris meeting on climate change and suggests the need for a consensus to build a common action plan to mitigate climate change and conservation covering the entire eastern Himalayan system.

Established in 2006 as the Balipara Tract and Frontier, it started work by enrolling farmers across 50 villages in Assam to build a data bank on local agricultural practices to spread organic farming. The brainchild of Ranjit Barthakur, an entrepreneur who, unlike many hardcore industrialists, cared for nature, wildlife and conservation of the beautiful landscape of Assam and the region, in 2007 it became a non-profit organization. The Balipara frontier tract was listed under Part B along with Abor and Mishmi hill districts in the Sixth Schedule. The late N K Rustomji, who established the administration of the North East Frontier Agency (now Arunachal Pradesh) found the region “enchanted” for its rich flora and fauna. This might have



“We need to provide basic needs for all and move from an economy where what is bad is cheap and what is good is expensive sounds truly Gandhian”

motivated the Balipara founders as the very words Balipara Frontier conjure up images of unspoiled nature.

This probably explains the passion with which the foundation developed and introduced, probably for the first time in the country, the theory of Naturenomics™ and its spread as its mission. Simply put, Naturenomics™ rejects the conventional wisdom that “development forces us to make a choice between development and sustaining natural resources” which inevitably means degradation of environment and life support systems; instead, Naturenomics™ suggests that “the only rational choice for mankind is to have economic development along with sustaining our natural resources”, the reason being that the environment cost, even when calculated on conservative basis as pointed out by noted Cambridge economist Sir Partho Dasgupta, might as well indicate a clear adverse cost benefit ratio in respect of a number of hydel and mining projects.

The foundation’s strategy includes the creation of “nature capital”

in the form of what it calls “ecologically compliant” assets; these are organic farming nurseries for distribution of saplings and organic inputs to replace chemical inputs, bio-diversity security through conservation and cultural security through alternative livelihoods, demonstration breeding units for poultry varieties suitable for local conditions, revival of ecologically sound traditional land use and water management practices and sustainable energy by tapping renewable resources. The foundation deserves accolades for putting across ideas that largely remained in the realm of theory into practice and developing a Naturenomics™ framework as evident in the work of two recipients of the Naturenomics™ Award — Richard Belho of Nagaland and Rupjyoti Saikia Gogoi. Belho trained Naga youth to acquire employable skills and protect environment while Rupjyoti provided training and marketing facilities to local weavers, improved their skills and productivity and uplifted rural women and youth.

That the foundation’s Naturenomics™ initiative is crucial for the region was stressed by

Dr Gunter Pauli, eminent Dutch exponent of the concept of “Blue economy” while delivering the third RN Barthakur memorial lecture. His idea that “we need to provide basic needs for all and move from an economy where what is bad is cheap and what is good is expensive sounds truly Gandhian” and more so in the background of his work at the Zero Emissions Research Institute that he set up at the UN University in Tokyo to develop competitive business models on recycling waste and converting the same into revenue through a value chain generating investment and jobs. No doubt Dr Pauli’s thoughts have raised questions about the validity of the growth model that India has adopted. The work of the foundation thus deserves to be noted by the government and the ethical and social contents of Naturenomics™ made central to development strategy.

However, there is perhaps more in the Balipara initiative than the fact of a vibrant environment movement; it shows that the region is not all about unrest and violence.

The author is a retired IAS officer of the Assam- Meghalaya cadre.

Snapshots from Elephant Talk and Awards Function



Shri Tarun Gogoi, Honorable Chief Minister of Assam with Prof. Kamal Bawa, University of Massachusetts



S.K. Dutta with D. Modi, Senior General Manager Amalgamated Plantations and Mrs. Modi



Winners of Bali para Foundation Awards at the Awards Ceremony



Sanjid Dutta, Chief Coordinator and Robin Eastment, Programmer Manager, Bali para Foundation



R.K. Srivastava, Inspector General, Project Elephant, Govt. of India and Khyne U Mar, University of Sheffield, UK.



Dr. Shyam Barua and Jackie Leitch at the Awards Photo exhibition



Radhka Barthakur, Trustee, Balipara Foundation at the Photo Exhibition at the Balipara Foundation Awards



Dr. Varun Goswami, WCS, at the Conference



Ranjit Barthakur, with Naresh Mitra, Senior Correspondent, Times of India



Biswajit Chakrabarty, Head FICCI North East Chapter and Tanushree Hazarika, MD Eclectic North East



Prof. Lisa Mills, University of North Carolina, USA, Deeapk Atal, MD APPL Foundation and Dhiraj Kakati, Managing Trustee APPL Foundation



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