

Conversations Today

Your journal about the world of NGOs and Social Enterprises

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An exclusive interview with Dr. Irulandi IFS (Retd.)

FROM THE EDITOR

Dear Reader,

In the land of diverse cultures and vibrant landscapes, India's forests have played a crucial role in sustaining life for centuries. As the world faces pressing environmental challenges, the significance of preserving these vital ecosystems has become more apparent than ever before.

At present, India is home to various forest types, each hosting a rich array of flora and fauna, many of which are endemic and endangered species. These forests serve as a natural habitat for wildlife and are essential for maintaining ecological equilibrium. However, rampant deforestation, illegal logging, and encroachments have led to a considerable loss of forest cover over the years. To combat this crisis, adopting sustainable forest management practices is indispensable.

Sustainable forest management entails finding a balance between meeting human needs and conserving the natural environment.

Preserving India's forests is also crucial in the global fight against climate change. Forests act as carbon sinks, absorbing carbon dioxide from the atmosphere and storing it in trees and soil. By conserving and expanding forests, India can contribute significantly to reducing its carbon footprint. This aligns with the country's international commitments to combat climate change under agreements like the Paris Agreement.

Furthermore, sustainable forest management can enhance India's resilience to natural disasters. Forests play a vital role in regulating water flow, preventing soil erosion, and reducing the impact of floods and droughts. With a growing population and increasing urbanization, the protection of forests is essential to ensure a secure and sustainable water supply for both rural and urban areas.

The promotion of sustainable forests in India demands a multi-pronged approach involving government policies, community involvement, and public awareness. Stricter enforcement of environmental laws, along with incentives for sustainable practices, can help curb illegal logging and forest degradation. Collaboration between the government, private sector, and non-governmental organizations is essential to achieving the ambitious reforestation and afforestation targets.

Moreover, fostering environmental education and creating awareness about the importance of forests among the general public is crucial.

The need for sustainable forests in India is not a mere environmental concern but a vital imperative for the nation's survival and prosperity. By preserving and restoring our forests through sustainable management, India can safeguard its biodiversity, mitigate climate change, secure water resources, and uplift the lives of forest-dependent communities.

A collective and determined effort is required to create a greener and more sustainable future for the nation and the generations to come.

Marie Banu Rodriguez

EDITORIAL

Latha Suresh
Marie Banu

Talks With Sri Ramana Maharshi

M.: An examination of the ephemeral nature of external phenomena leads to vairagya. Hence enquiry (vichara) is the first and foremost step to be taken. When vichara continues automatically, it results in a contempt for wealth, fame, ease, pleasure, etc. The 'I' thought becomes clearer for inspection. The source of 'I' is the Heart - the final goal. If, however, the aspirant is not temperamentally suited to Vichara Marga (to the introspective analytical method), he must develop bhakti (devotion) to an ideal - may be God, Guru, humanity in general, ethical laws, or even the idea of beauty. When one of these takes possession of the individual, other attachments grow weaker, i.e., dispassion (vairagya) develops. Attachment for the ideal simultaneously grows and finally holds the field. Thus ekagrata (concentration) grows simultaneously and imperceptibly - with or without visions and direct aids.

In the absence of enquiry and devotion, the natural sedative pranayama (breath regulation) may be tried. This is known as Yoga Marga. If life is imperilled the whole interest centres round the one point, the saving of life. If the breath is held the mind cannot afford to (and does not) jump at its pets - external objects. Thus there is rest for the mind so long as the breath is held. All attention being turned on breath or its regulation, other interests are lost. Again, passions are attended with irregular breathing, whereas calm and happiness are attended with slow and regular breathing. Paroxysm of joy is in fact as painful as one of pain, and both are accompanied by ruffled breaths. Real peace is happiness. Pleasures do not form happiness. The mind improves by practice and becomes finer just as the razor's edge is sharpened by stropping. The mind is then better able to tackle internal or external problems. If an aspirant be unsuited temperamentally for the first two methods and circumstantially (on account of age) for the third method, he must try the Karma Marga (doing good deeds, for example, social service). His nobler instincts become more evident and he derives impersonal pleasure. His smaller self is less assertive and has a chance of expanding its good side. The man becomes duly equipped for one of the three aforesaid paths. His intuition may also develop directly by this single method.

D.: Can a line of thought or a series of questions induce Self-hypnotism? Should it not be reduced to a single point analysing the unanalysable, elementary and vaguely perceived and elusive 'I'?

M.: Yes. It is really like gazing into vacancy or a dazzling crystal or light.

D.: Can the mind be fixed to that point? How?

M.: If the mind is distracted, ask the question promptly, "To whom do these distracting thoughts arise?" That takes you back to the 'I' point promptly.

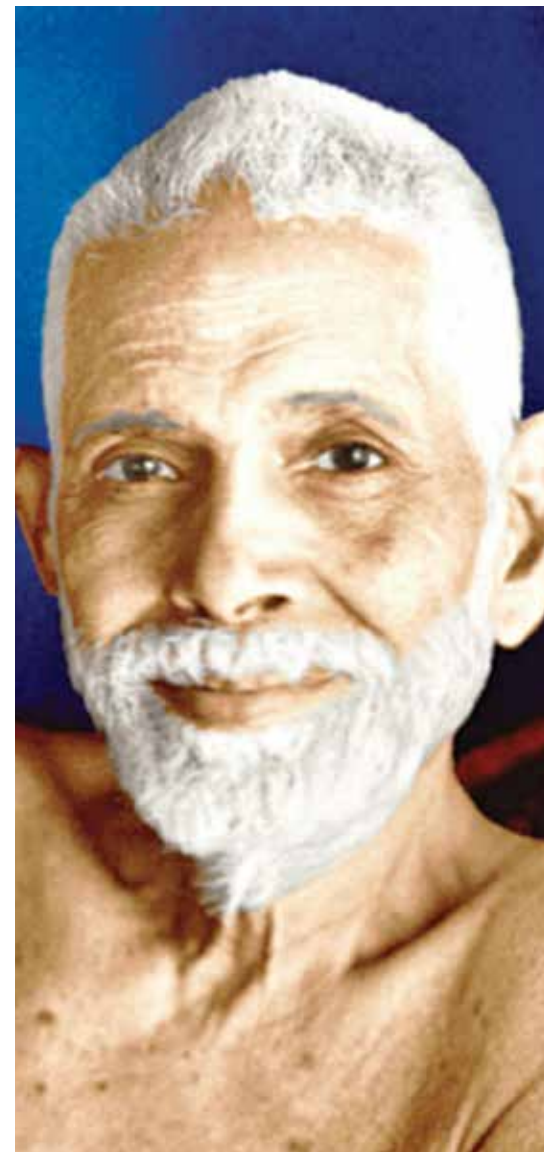
D.: How long can the mind stay or be kept in the Heart?

M.: The period extends by practice.

D.: What happens at the end of the period?

M.: The mind returns to the present normal state. Unity in the Heart is replaced by variety of phenomena perceived. This is called the outgoing mind. The heart-going mind is called the resting mind.

D.: Is all this process merely intellectual or does



it exhibit feeling predominantly?

M.: The latter.

D.: How do all thoughts cease when the mind is in the Heart?

M.: By force of will, with strong faith in the truth of the Master's teaching to that effect.

D.: What is the good of this process?

M.: (a) Conquest of the will - development of concentration.

(b) Conquest of passions - development of dispassion.

(c) Increased practice of virtue - (samatva) equality to all.

D.: Why should one adopt this self-hypnotism by thinking on the unthinkable point? Why not adopt other methods like gazing into light, holding the breath, hearing music, hearing internal sounds, repetition of the sacred syllable (Pranava) or other mantras?

M.: Light-gazing stupefies the mind and produces catalepsy of the will for the time being, yet secures no permanent benefit. Breath control benumbs the will for the time being only. Sound-hearing produces similar results - unless the mantra is sacred and secures the help of a higher power to purify and raise the thoughts.

Source: Talks With Sri Ramana Maharshi

Research For Development

Research in agriculture has been a critical part of India's growth story. It not only ushered in an era of increased agricultural productivity and food, nutrition security, but also impacted rural poverty greatly. Scientists have consistently endeavored to study farming and farm eco systems to ensure that farmers are able to efficiently plan their harvests. "This is just a sliver of the full scope. Technology is a big promise that can deliver if channeled towards the right end," claims Dr Sundaram Seshadri, Secretary of the Indigenous and Frontier Technology Research Centre in Chennai.

He is a botanist by education who has had various opportunities to identify research and development potential in all the capacities he worked in. His research started with studying the existence of biofertilizers like algae in soils identified through various methods including immunological studies largely used at that time to detect microbes under the guidance of Prof. Dr. C. Lakshminarasimhan, Head of Department of Botany, AVVM Sri Pushpam College, Poondi, Thanjavur District situated amidst lush green paddy fields. Training on biofertilizers he acquired under him during his doctoral stint, their application on different crops in the surroundings and the training programmes organized for the field staff of sugar factories offered him an opportunity to work in a sugar industry and that required him to handle bio-fertilisers and bio-pesticides and lay trials in the sugarcane fields. He also had a chance to manage one of the largest nurseries in Tamil Nadu with 10,000 oil palm seedlings. "Bio-fertilisers have paramount importance in soil fertility management and the strains identified so far have evidently shown the potential in this field," he asserts. I was drawn to research again," shares Sundaram. A chance to work closely with Fr. S. Ignacimuthu, Director, Entomology Research Institute at Loyola College in Chennai involved examining microbial interactions with environment, plant and insects and helped him engage in setting his hands in development of genetically modified plants also along with control of stored product pests thereby increasing the shelf life of grains and plant biotechnology to produce more plantlets in a shorter duration of time in vitro. These studies also gave him required strength to voice against indiscriminate spread of Genetically Engineered Plants without proper investigation. He also spent a few years teaching microbiology and genetic engineering to master's students of biotechnology at Sri Ramchandra Institute of Higher Education and Research, Chennai.

As a visiting professor at the Chungbuk National University in South Korea during early 2000, where he also served as a visiting scientist in 2017, he could publish on microbial strains beneficial in eco-friendly agriculture. "While guiding students I realized that food security was a common thread that united minds from all



over. I helped them in developing microbial cultures and evaluate them on plant growth promotion. I came to India with the same enthusiasm and taught again," he says, acknowledging that student interactions have been invigorating in both the countries.

But Sundaram's heart was in research. He wanted to contribute towards developing efficient lab to land programs through his studies. Aptly he joined Shri AMM Murugappa Chettiar Research Centre (MCRC) in Chennai, one of the few organizations involved in Research, Development and Dissemination of appropriate technologies. Inspired by the idea of developing technology that was appropriate for societal development, he engaged in various projects. He took the notion of alternate cropping using medicinal plants to large groups of farmers and simultaneously promoted tissue cultured *Gynema sylvestre* plants with uniform qualities. He also engaged in production of biogas from farm wastes / food wastes as well as generation of microflora for biogas production from spent oil wells. He also handled a project where farm residues were used for the production of biochar, which can either be used, in water filters to get potable water, to clean the textile dye wastewater, as fuel pellets in iron boxes or grills or as incense sticks with added fragrance. But the value of the studies enhanced when the biochar was investigated as a supplement in improving the soil quality. "The results of the recent large-scale studies have proven their merit as an agent to reduce the use of nitrogenous chemical fertilisers, a beautiful process that release the fertilizers slowly, improve the water retention capacity and improve the microbial load as an added advantage. These are a cluster of processes, which when managed

together in a farm, not only help in overall management of the farm but also replenish soil nutrients. That's the beauty in developing practices for eco-friendly agriculture. You look at the whole and plan for an eco-system," he explains.

Sundaram has also mentored a project on biological carbon sequestration and studied the potential of algae as a candidate to sequester carbon and clean up wastewaters and worked on sand filters and carbon filters to make water potable in rural areas. Another significant work include the isolation of pink pigmented facultative methylotrophs – a form of bacteria which is omnipresent including the polluted areas, ventral sides of plant leaves and that can be used in the production of plant growth hormones. "All these years I was working in the lab, with farmers and also mentored students. I helped each analyze their problems and introduced how complementary alternate agronomic processes could be. It was then time to focus on connecting traditional knowledge with advanced technology. That is how Indigenous and Frontier Technology Research Centre (IFTR) was born," shares Sundaram.

IFTR aimed at improving rural livelihoods using adapted/retrofitted advanced technologies. The problems faced by rural masses is the guiding principle and suitable solutions are worked out using technology already available. For example, rural women groups were engaged in producing eco-friendly paper from agricultural wastes, conversion of animal wastes to upgraded fertilizers etc. Holistic rural development including entrepreneurship and skill development among youth and women, village development (like provision of Water, Sanitation and Hygiene) are some of their focus areas. The biodiversity

program intends to promote Ecological Regenerative Agricultural practices in the farms and help the farmers understand how to preserve their ecosystem for better coexistence of plants. Promotion of nutritionally rich crop varieties has been very promising and the fact that IFTR and Shri AMM Murugappa Chettiar Research Centre (MCRC) tries to look at good yield with nutrient rich food has been encouraging and shaping farmers' perspectives to understand their farms as a holistic ecosystem.

A member of the Association of Microbiologists in India, Asian PGPR Society, Member of Board of Studies in Plant Biology and Biotechnology of various higher educational institutions, Advisor of Technology Business Incubator at Sathyabama Institute of Science and Technology, Chennai, Chairperson, Strategic Committee at the Bharatiya Yuva Shakthi Trust (BYST) in Chennai, cofounder of start-ups and associated with various other forums, he has continually engaged in shaping research, development and entrepreneurship interventions in the field of microbiology and agriculture. He is the recipient of Brain Pool Fellowship (2003 & 2017) from the Korean Federation of Science and Technology in Korea and was acknowledged as the Exemplary Mentor of Change by the NITI Aayog, Government of India in 2020. Sundaram's explorations continue even today and the myriad interactions with academia, youth, women, research fraternity, farming community and the micro, small and medium enterprises in rural areas keep inspiring him to pursue newer projects.

Shanmuga Priya. T



A condition of cancer? Are we worsening by inside and external catalysts and moving towards a slow death? It's a Social Work Professional's musings!

Recent happenings in the industry and NGO scenario where the social work profession is slowly getting eaten up, and its relevance is becoming tinier daily!

- The other professionals considered the social work profession not essential for the purpose it was supposed to serve.
- A culture that believes being of aid to society needs no degree. Being just compassionate and working hard is good enough.
- The Job spaces that were earlier earmarked for the social work professional are now accessible to anyone with any degree in the name of inclusivity.
- The thin golden line that existed in recognizing the varied competencies of Business management and social work professionals is now hardly visible, and the downside of social work is quickly happening.
- The NGOs have an onslaught of

Prognosis Of A Cancerous Condition – Rejuvenate The Social Work Profession

- engineers entering into development professions, and the need for a specific education to qualify for development work is missed.
- Government Jobs, which were earlier the pride of social work professionals, now are advertising for any graduate or postgraduate, not a specific social work degree graduate.
- Interestingly, many other degrees

- are seen as equivalent to or more significant than social work professional degrees in the industry over some time.
 - In the development sector, a social work professional is much undervalued in financial and position considerations compared to people with other degrees.
- In a world of outsourcing, will this profession too be outsourced soon? Where is the original social work

profession lost in obscurity? What is this cancerous condition it is struggling with? What obituary are we getting ready to write? Lost in this milieu, the social work professional stands, not realizing a quick action and rising hope will disable cancer. There is a silent acceptance of the situation; cries, disbelief, and a hopeless attitude will not help rise above the situation.

Understanding the fundamental differences and what social work education brings to social work is critical. Social work is not merely social engagement to improve a societal condition. It is not a mere philanthropic, compassionate, or activist attitude to bring justice and fair play into the living conditions of people. Social work education is a well-thought-out curriculum with a scientific, empirically based research process. Social work students are trained to understand that they need to help others to help themselves. The values and ethics of the social work profession are primarily centered around Service, Social justice, Dignity and worth of the person, the Importance of human relationships, Integrity, and Competence.

The social work professional emphasizes service, and the purpose is larger than the self. The attitude of not expecting returns before serving is an imbibed quality in an actual social work professional. The ability and need to establish social justice runs deep as an underlying factor in all their social interventions. Professional Social workers continue beyond development work to ensure inclusion and sensitivity in their solutions.

To uphold the dignity and worth of the person while reaching out a helping hand is foundational. They are compassionate and maintain the self-esteem of the people they work for. They follow the principles of human rights while resolving conflicts and ethnic differences.

The professional social workers understand the importance and value of relationships. They make people their partners and build rapport with them. Therefore their focus is on bringing people together and resolving issues. They create strategies to keep the trust and hope of people with them in resolving value conflicts.

Professional Social workers uphold integrity very highly. Their priority is not working to earn a name of fame for themselves. They are educated to work honestly and with sincerity. They work towards earning the trust of the community. It's a profession that they are into, and they have to maintain the integrity and credibility of the domain.

Building competence and constantly upgrading knowledge on socio-legal matters is part of a professional social worker's routine. This gives them the needed edge and confidence to handle challenging situations in the community and industry.

Most of these areas are optional education in other professions. But they are integral to social work professionals. The undergraduate and postgraduate degree courses are interspersed with fieldwork and experiential processes that prepare them to understand the requirements of the case better. They are also governed by principles of acceptance, non-judgemental attitude, and controlled emotional involvement.

Yet, despite all the education, processes, and efforts, why are the certified social workers allowing the cancer inside to spread and letting a slow death happen? Where have we faltered in recognizing our self-worth? Why aren't we upholding professional values and displaying the need for social work education in all critical decisions?

Development, betterment, and change are not the hallmark of many other professions. But it is the foundation of the social work profession. Have we lost our voice in comparing with others rather than living with conviction? Where has the cancer begun within us? What efforts are social workers making to showcase the value of social work education in their professions?

The need of the hour is to do an introspection. Bring perspective and attitude changes to the social work fraternity, academia, students, and professionals. Some follow-throughs would be

- Clarity on the vision and purpose right when a student chooses to become a professional social worker. A social work profession is not a default choice but a conscious decision.
- Embedding the values and principles of social work with adequate emphasis in the educational phase at undergraduate and postgraduate degrees.
- Social work professionals must uphold professional values and not short-sell themselves

to find a livelihood. While the other professionals coming into the development sector are being paid for their degrees, the social work professionals do not stand up for what they are worth.

- The communication capability, visibility, and ability to comprehensively showcase the thinking process and implications in the balance of head and heart is to be improved in a social worker. These areas are subtle but unique that the profession brings to the plate. They go unrecognized many times.
- Multi-lingual capability with English proficiency can uplift and expand the wings of social workers at a global level.
- Proficiency in technology usage and analytical skills are to be enhanced to allow social workers to reach out efficiently at global levels.
- The self-worth, self-esteem, and conviction in one's profession, choices, and values are the foremost need to fight cancer.
- Learning, doing, innovating, and updating knowledge and practices have to become the mantra for a social work professional.

The most critical action is to build a strong force amongst the fraternity, move to look into the macro



picture, and congregate to bring back life and energy into every dimension of the social profession. If we stand silent and watch the cancer grow, it will soon envelop our entire identity. If we do not stand up for what we, as professional social workers, are worth, no one will spend time understanding it. The time is NOW, and it calls for an awakening!

Dr. Kalpana Sampath



Centre for Social Initiative and Management

Centre for Social Initiative and Management (CSIM) is a unit of Manava Seva Dharma Samvardhani (MSDS). It is a learning centre that promotes the concept of social entrepreneurship.

CSIM offers training and consultancy to social enterprises – for-profits and non-profits to facilitate them to apply successful business practices and yet retain their social mission. It also offers training and hand holding support to prospective social entrepreneurs and enable them to launch their social initiatives. www.csim.in

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Farming Remotely



Agriculture is not a rural activity anymore. It has expanded its presence into urban and peri-urban environments as well. This evolution is driven by various factors and reiterates the vastness of farming as an extensive industry. These days it is not uncommon to find individuals who leave mainstream careers to pursue farming. This is more than just a passing trend and represents a significant shift in mindset and lifestyle for many individuals. “The concept of regenerative agriculture, which focuses on restoring soil health and biodiversity, as gained traction. People see farming as a means to contribute to this movement and heal the environment. But not all of them have the time and means to pursue farming after this realization strikes,” says Mr Kannan Ponniah, Director of Farm Green Track Services in Madurai, Tamil Nadu.

A qualified Physicist with a Doctorate in Radio Astronomy, Kannan was a renowned professor who had worked in many colleges and schools. As his father was a farmer Gudalur, Theni, he did not drift far away due to his career. “At one point, I knew it was farming for me. I longed to start somehow,” he recalls. While still working, he bought a coconut farm in the outskirts of Madurai and followed organic practices thoroughly, right from the beginning. However, the yields were not satisfactory and the revenue earned from 2000 coconuts from 400 trees was not good enough to maintain payments for the staff and farm inputs. Soon, in a matter

of three years, this revenue increased by 12.5 times and Kannan made 25,000 coconuts from the same 400 trees in his farm. “The revenue increased, I began to see profits. I thought of maintaining this cycle but my wife had new plans,” he shares.

Kannan sold his coconuts to retailers who bought it from him and resold it in different places. However, his wife saw the potential in this and suggested that a team of women be engaged in dehusking the coconuts so that they can sell their coconuts themselves. “It was a good idea to connect to buyers directly, but it involved human resource costs. I was skeptical, but still we went ahead and engaged a team of ten women and five men who would de-husk coconuts and take them to various places for sale. It worked and our profits increased gradually. But more than profits, this experiment helped me see the importance of value addition. I was by now ready to get into this full time,” says Kannan who was still doing farming as a part time activity, completely supported by his wife who managed the coconut farm full time.

Soon after six months, he quit his job and wanted to expand his farm activities. As usual, his decision was ridiculed by some but also applauded by few. He wanted to do it bigger and sold his farm of eight acres, in search of a bigger land. After spending about two years in searching for a larger land he identified one in Thenkasi and purchased 120 acres. “I wanted to start slow, but intended to buy a bigger piece of land so that I



can expand the business eventually,” he adds. When he shared his pursuit and land purchase with his friends, he was amazed at how interested others were too. They also wanted to invest in few acres and with more members showing interest, Kannan thought that cooperative farming was the way forward. Mr Peramanallur Narayanaswamy Subramanian (PNS), Managing Trustee of Manava Seva Dharma Samvardhani, also bought a few acres and we both wanted to develop a sustainable business model cashing on people’s interest.

By now, Kannan very well understood that farming was something many people related to but were not able to openly pursue due to their current career commitments. Not all of them could afford the risk of this transition. And for that matter, not all of them may have the right knowledge to move ahead. For all such people, he felt absentee landlordism could be the answer. He, along with PNS founded the Farm Green Track Services in 2009 to encourage interested individuals to buy land from them so that they can do farming on that land for them.

“I was doing the same work on a bigger land, but the revenue was distributed now. I manage a bigger farm now, on behalf of new owners, but had the liberty to try out different cropping patterns. Owners who registered with us not only get annual returns, but also see a rise in asset value within two years. The model worked well

and soon we had over 25 members who registered with us. In seven years, I reclaimed my full investment,” shares Kannan.

Given the advantages of large scale farming, his idea made sure that land fragmentation was not an impediment anymore. Backed by good research of the local soil, root microbiology, and an independent team that produced manure needed for the total land area, he was able to recover from the first three years of loss. It was all a learning process for someone, who hardly knew anything about selling and market behavior.

“I learnt because I knew quality is important and that only quantity can give you the money. We initially harvested about six tonnes of tomatoes per acre and now we make around 50-75 tonnes on the same stretch of land. Our spinach and greens are exported to London too. With clients across India, USA and the UK, we have been able to prove that farming can be managed remotely as an industry,” says a proud Kannan.

At Farm Green, orchards are also grown and Kannan has huge plans for value addition and eco-tourism here. All set to try out intercropping vegetables in these orchards, his business expansion is planned in such a way to generate employment opportunities for the local population.

Shanmuga Priya.T



Ai For The Social Sector Professional: A Non-Tech Viewpoint

‘To smash the simple atom

All mankind was intent.

Now any day

The atom may

Return the compliment’.

This little poem from the 50s era seems to summarise the New Age dilemmas we face with the inexorable march of Progress, presently bearing the flag of Artificial Intelligence.

While the vote is out there, with many saying the rapid spread of AI spells doom and gloom and an equal number saying the opposite, the change is here to stay. People in all domains are using AI to deliver operational tasks.

Exciting, scary, worrying, complicated, challenge, opportunity are words that come to my mind when I see the term AI. I decide to look online for information that will help me take a view on it.

What does AI include

‘What does Artificial Intelligence include?’ Typing the question into Google generates this intriguing picture mentioning several areas.

Some of the icons immediately strike a familiar chord. Duolingo helps a friend to learn Italian complete with grammar and daily conversation, WAYZ helps my co-driver (and husband) to find the quickest route while identifying both speed limits and police cameras on the road ahead. My bank app recognises my face without the need for a typed-in password, I dictate messages to my phone and see them come out in writing in a moment. Saving time and increasing convenience every day, these AI examples are welcome additions to my phone screen.

Administrative support

Moving to other not so familiar areas, I learn about ChatGPT. Amongst the many uses of it, I see a benefit for me: getting a comprehensive first draft on the blurbs I write to attract volunteers, participants or donors, saving effort and time.

Neural Networks and Deep Learning come next. They appear to have definite potential for the data gathering and analysis part of my work. Capturing feedback from beneficiaries using image or speech recognition, taking advantage of deep learning and machine learning to identify patterns and make predictions, using Natural Language Processing to sweep through social media posts and extract data showing public sentiment are areas that would be worth my while to explore and learn about.

Creative input

A non-profit I had worked with used street plays to demonstrate the impact of their services aimed at women suffering domestic violence. With such a difficult subject to write about, I can imagine how useful it might be to get the bare bones of dialogue outlined through AI using different settings. Customised stories taking the context of different regions and situations could be great tool to enhance their connection with the potential beneficiaries and their reach.

Reading about the potential for creating illustrations, I use DALL-E to provide a black-and-white sketch of ‘Artificial Intelligence a bane or a boon’ The result has some strange words in it (no idea why!) but is interesting.

The suggestions that comes up in the free version, from cartoon to artistic, suggest several enhancements. One of these is to create a painting in the style of your favourite artist with a surprisingly credible Van Gogh illustration of a house.

For those not already using similar tools, there are numerous opportunities to add to brochures, educational content, information about activities and reports. The risk to beware of is that the AI suggestion may not always make sense, and often has to be appropriately vetted by the author.

Every sector is transforming

The features of AI, advantageous or otherwise, have changed practices in every sector. Thinking of Education, teachers already use it send automated reminders to students, arrange timetables and



manage attendance.

For the future, education tech startups are probably working out what next generation job requirements could be. Their inputs could lead to developing a breed of workers trained to do jobs in ways that do not even exist today.

AI gives the benefit of scale. Someday the different programs could come together to help harness the talent of our huge youth population, at the same time creating a highly specialised workforce in the country.

AI analytical tools can identify personality traits and interests, matching them to areas where they would be most valued. Designing a program such as this could mean that the entire education system shifts to a customised approach for senior school students, different from the ‘One size fits all’ largely in force today. A pathway to enhancing expertise, talent and innovation for our youth.

In the Healthcare sector, organisations are making

the news with their work on predictive analytics. A World Economic Forum article from October 2022 refers to NITI Aayog applying AI for early detection of diabetes and as a screening tool in eye care, by comparing its diagnostic accuracy with that of specialists. Tata Medical Centre and the Indian Institute of Technology are reported to have recently launched India’s first de-identified cancer image bank, enabling machine learning models to detect biomarkers and improve outcomes for cancer research. Similarly, Apollo and Microsoft are said to be jointly developing a machine learning model to better predict heart attack risk.

On the lighter side, robots divert diners in a restaurant with the novelty of gliding with you to your table, delivering your order with a polite speech and singing a Bollywood song on request. The entertainment industry has songs being sung in the voice of different artistes and is creating different types of content on a regular basis. Sports teams use AI to improve performance. Every sector is indeed transforming.

Bane or boon?

Just a few weeks ago in March 2023, the nonprofit Future of Life Institute released a letter signed by more than a thousand technology leaders and researchers. These people have urged artificial intelligence labs to pause development, warning about “profound risks to society and humanity.”

AI tools, even with safeguards built in by developers, can be tricked to help with illegal and dangerous activities. The rapid pace of development and the lack of ability to place rules around it are worrying aspects. While firmly on the side of those asking for greater responsibility, greater ethics on the development and use of AI, I accept that AI seems here to stay. There is little point in considering it as a monster to be killed, at this stage.

Reviewing the brief amounts of information I have gathered from the Net, I conclude that AI cannot replace humans. What it does for us is to create time for activities, areas and people who benefit us the most. By taking on a number of day-to-day tasks, it allows us the space to regain the eye contact, the hand at the bedside, the walk in the park and the breath of fresh air that is being lost in an increasingly busy life.

AI is a tool. It is one more tool available to us and we can use to make tasks simpler. The first Industrial Revolution had machines take over certain physical jobs from man, and created the ability for our skillsets to change and adapt. The Fourth Revolution is about these machines helping to synthesize information and therefore to direct resources, albeit at a scale and in ways we have not even imagined. This will also create the ability for our skillsets to change and adapt.

Man has let the genie out of its box. It is for mankind to use the genie’s powers wisely, for the good of all. Neither bane nor boon, as is often the case, it’s impact depends upon the intention of the person using the tool.

Karuna Luthar

How Bagless Tea Dip Brand Woolah Has Sustainability At Its Core

In 2021, Upamanyu Borkakoty and Anshuman Bharali launched Woolah—a bagless tea dip brand that uses two leaves and a bud tied with a string instead of a paper or plastic bag. The company employs around 80% women in the process and aims to improve the socio-economic conditions of its workers

Your quickest way to have a cup of tea may not just be the healthiest. The tea bag you use may not just release brew, but microscopic plastic particles as well in your cuppa.

A 2019 research study from McGill University in Canada threw up this startling fact.

Researchers found that a single plastic teabag released about 11.6 billion microplastic and 3.1 billion smaller nano-plastic particles into the hot water. These particles are completely invisible to the naked eye.

Even tea bags made from paper cannot be absolved of this fact. The study pointed out that a small amount of plastic is used to seal bags shut.

What then is the solution?

Brewing tea dust or leaves is not always the best idea or convenient as tea bags.

In 2021, Upamanyu Borkakoty and Anshuman Bharali introduced Woolah, a tea brand they claim to be the world's first bagless tea dip. Patent-pending, the product is simple, efficient, and convenient—it comprises of two tea leaves and a tea-bud attached to a string that can be used to brew tea, more than once.

Before the Woolah idea struck him, Borkakoty, who was born and raised in Sivasagar, a town in upper Assam, followed the corporate route after his graduation and MBA. He worked in companies like Wizcraft and Sennheiser when a holiday back home changed his path towards entrepreneurship.

"I was in a grocery shop and came across a farmer who was trying to sell the shopkeeper some packets of green tea. We got talking and he told me that it was all handcrafted organic green tea. Till then, I was using packaged green tea and when I used the one I bought from the farmer, I was hooked," Borkakoty says.

Even then, the idea of researching into tea or using it as a pathway towards something unique did not strike on. On a business trip to China, he decided to extend his stay to tour the Fujian province to learn more about teas.

"I came back and spoke to my childhood friend Anshuman about it. We decided to start a venture called the Tea Leaf Theory in 2016 to showcase high qualities of Assam tea," he says.

Borkakoty figured that the tea produced in Assam was of regular quality and only around 5% of the production was high quality tea.

He also discovered there were many organic tea farmers, but they were selling it to inorganic factories at a poor rate, and



the quality of tea was getting affected. The question was how to create a specialty market from Assam and convert small-time organic farmers into tea producers.

"We started experimental stations where tea was handcrafted by skilled craftsmen and started selling tea to boutiques in Europe and North America. It was during this time I read about the McGill University research and though I was almost four years into the industry, I was not aware of the microplastics in tea," he explains.

The rampant use of tea bags—around 65% in the UK and 97% in Germany and the resulting studies on the effect of microplastics on the human body made the founders think of a solution that was eco-friendly, sustainable, and one that avoided packing the tea in a bag altogether.

The co-founders wanted to bring the authentic taste of tea back into people's lives.

"Usually, tea pickers pick six leaves or seven leaves and a bud, but we decided to use the top two leaves and a bud, tie it with a string, and compress it in a semi-dried form. After that, it's sent for drying. It

takes the shape of a tablet. When boiling water is poured over it in a cup, and left for five minutes, it gives you the taste of orthodox tea," Borkakoty elaborates. The leaves can be brewed two more times without loss of taste or aroma.

Borkakoty says Woolah has created a model where they buy in pieces and not by kilograms. It currently works with two micro-organic factories in Dibrugarh district and Kakopathar and 20 organic growers who sell their leaves and make almost 4X more revenues.

Also, the number of workers in the tea industry in Assam has been dwindling due to migration to other states, and so the brand is focused on women for processing the tea in factories.

"Our solution was to get women from nearby villages to work with us. We noticed a lot of them were accompanying their children to school, and waiting there until it was time to bring them back home. We asked these women to work in our

factory instead of being idle," he explains.

Both the factories employ around 140 women who are involved in plucking, segregating, weighing, compressing, and drying the leaves. These are then sent to the packaging unit. The product is 100% compostable.

The women earn a minimum of Rs 350 a day, which can go up to Rs 800 on flexible shifts. Even college students take advantage of it to earn an income and fund their education, he says.

So far, Woolah has sold one million dips through its own website and on Amazon, and has launched in the UK and other countries in Europe.

Borkakoty says the Sivasagar-based company is on its way to clock a revenue of Rs 3 crore this fiscal. It raised Rs 2 crore from Mumbai-based Gangwal Group last year. Fifteen dips cost around Rs 450, and he believes the specialty tea industry will remain expensive until the production process becomes more efficient.

Woolah's focus on sustainability extends to its community of workers as well. "We have been supporting the education of 140 children of workers with books and stationery. This year, we distributed 150 solar lamps to households in villages with erratic power," he says.

The founders are looking to raise a fresh round of investment to scale the business and penetrate markets in the US, Europe, and the Middle East.

Rekha Balakrishnan
Source: Yourstory.com

Hope For Children In Slums In India: Class Is In Session!



India never awakens to the dawn gently. The sea of humanity collides as each heads to work, market, and schools. Familiar scenes of pupils scampering to their schools during assembly like the one at Koramangala, Bengaluru are all too common.

Getting an education is paramount in this nation of 1.4 billion people – a point that Peggy Foo, a volunteer with Singapore International Foundation is keenly aware of. “Children in India - they have great potential to learn,” she says while being warmly greeted by a sea of students dressed in blue and green school uniforms as she stands at the school assembly. “The key is to provide them with the right kind of guidance to help them maximise that potential.”

In 2017, the Singapore International Foundation partnered with Parikrma Foundation and launched a specialist education volunteer programme, with Peggy and other Singapore International

Volunteers (SIVs) coming together to galvanise the teaching of Math and Science in Parikrma’s schools.

Parikrma is an NGO that is dedicated to providing free education to children from Bengaluru’s slums and orphanages. The work that the NGO does is not lost on Peggy. “What inspired me to take on this project is having benefited from people who have taught me and coached me very well when I was in school, I thought if I could train the teachers to teach more effectively, that could in turn benefit a lot of children”.

Through annual exchange programmes between Singapore and India, the SIVs have nurtured a core group of Indian Master Teachers, proficient in the pedagogies that led Singapore to excel in international competency rankings. These Master Teachers waste no time in sharing their knowledge with their fellow educators. The speed with which change and knowledge gathering was happening

stunned Shukla Bose, the founder of Parikrma Foundation. “The teachers came back flying, literally, metaphorically, figuratively! We could see the impact in the classes.” What became apparent to Shukla and the other teachers was that the level of interactivity and engagement of the students just went through the roof. Learning has become fun.

The Covid-19 pandemic threatened to derail the programme, as closed borders meant teacher training had to be brought online. Reflecting on the pandemic years, Shukla marvels at the way the programme still worked well over the Internet. “Peggy ran the online classes extremely well when we had no other option,” Shukla remembers. “When she is teaching her knowledge, her expertise comes through. Our teachers gravitated towards her and learning happened automatically.”

The trials and tribulations throughout the partnership forged a strong bond between the SIVs and Parikrma

Foundation. “Peggy has been more than just a Master Trainer for us. Peggy has been a friend.” Shukla is grateful for the person that is Peggy and the knowledge that she brought to the meetings. To both Shukla and the teachers in Bengaluru, Peggy was not a foreigner - she was one of them.

The mutual admiration is apparent. Peggy always arrived and left India with a healthy dose of respect and love for her counterparts and friend Shukla. “It’s a really wonderful experience that some of us, including myself, can go to India and share our experiences with them. I think it’s a lot more personal now. We have friendships. We have relationships.”

A story by Our Better World – the digital storytelling initiative of the Singapore International Foundation (www.ourbetterworld.org)

Beauty is Simplicity

Health is a beautiful thing, whether we're speaking about humans or plants. A fresh and flourishing field is a sight to see, one that fills you with peace and happiness and gratitude. And to achieve health for plants, there are only two things you need to do - feed, and protect. In other words, you need to get them the food and water they need, and you need to protect them from anything that threatens their health such as diseases and pests. The challenge is to do these as simply and with as less expense and fuss as possible. Because the more complex we make things, the less likely it is that they will endure. This is in fact true in every sphere of life - it's the simplest habits and gestures and tasks that bring us the best rewards always....

Coming back to plants, In a mono-cropping system, it often happens that the soil doesn't have enough of the particular nutrition that the species needs. This problem is accentuated by the fact that all the plants in the field need the exact same nutrients. People usually try to address this by putting into the soil the nutrition that the species needs. This addresses the immediate issue, and the field of plants receives nutrition artificially. But as we know, Nature works in cycles and not linearly. After the plants have had their fill, there are residual chemicals in the soil which have to be removed or recirculated somehow. When they are removed by water movement, they cause problems further downstream, such as algal bloom, and the disruption of the soil-chemical balance elsewhere. When the residue is left in the soil where it has been applied, then too it causes imbalance issues. And these are big problems, even if we choose to ignore the issue of harmful chemicals getting into the food we eat.

The major difference between this paradigm, and a multi-cropping paradigm is that in a multi-cropping field, there are so many species that the idea of applying the fertilizer that each one needs to each of the plants of that species doesn't even arise - it would be quite impractical and almost impossible to implement. So the way we do it is to make the soil richer and more nutritious for all the plants. Another difference is that we focus on living nutrition - the belief is that if the soil is a living one, and has enough microbial activity and diversity, then the plants' needs will be taken care of. Yet another difference - and this one is a crucial one - is that the only additives allowed are those that would naturally be found in the soil anyway, and not something which is outside the natural soil cycle. Excluding all unnatural substances is the only way to ensure that soil cycles are not disrupted, and all the nutrition not used by the plants will not be obstructing the

soil cycle but be processed out of it naturally, without causing any harm whatsoever. This is the foremost reason why cowdung - or farmyard manure (FYM), and cow urine, form such a major part of any organic fertilizer. These are rich natural materials that by themselves provide nutrition to plants, and also encourage the growth of plant-friendly microorganisms. Ancient Indian farming systems were very aware of this - traditionally, cows have always been a part of the farming ecosystem. Just having some around adds enormous value even if you don't milk them.

There is a lot of literature on organic fertilizers and organic fertilizer technology. Much of it is complex and jargonated, if I may use this word. But in reality, organic fertilizers need only three ingredients to work - a base or matrix material such as farmyard manure, a slow-fermenting source of glucose or sugar such as flour or crushed grain, and a quick-fermenting substance or accelerant such as jaggery. Let's take a quick look at the functions of each of these in the process of soil enrichment.

Farmyard manure is the source of microorganisms. These are the creatures that will cause the fermentation reactions to occur. Instead of farmyard manure, sour buttermilk or a yeast mix or any other source of microorganisms can be used, but farmyard manure is the best one, with which I've seen the best results. Another big advantage is that it's easily and

inexpensively available and also easily transportable, both big considerations for a farmer.

Next we need something that ferments quickly, such as jaggery or palm sugar. Adding this makes sure that your plants quickly get the nutrition that they need. And we also need a slow-fermenting material such as flour or crushed grain or rice bran. This is to make sure that even after the quick-fermenting material is used up, there still remains a source of food for the microorganisms, making nutrition available to the plants over a longer period of time too.

Easily available, easily made organic fertilizers are what we need, and a mix of these three discussed categories of materials is quite sufficient to fulfill all the needs of a vast majority of food plants. Yes, we can get all fancy, and make the whole process long and complex and expensive, but in truth, just one out of each of these three



categories suffices to give your plants enough nutrition. The core process is fermentation - you are basically using microorganisms to set up a fermentation reaction in your soil (this is already occurring naturally, you're just increasing and hastening it) so that the products of the fermentation process can become the nutrition for the plants. A huge added benefit is that having such enriched soil attracts earthworms, and we all know the infinite advantages of this.

So we've now taken care of the food for our plants. Water is essential, and this can be arranged through various ways, both short-term and long-term, as we've talked about in earlier discussions ('The Ways of Water', Conversations Today May 2023 <https://csim.in/conversations/ConversationsToday-May2023.pdf>)

The next thing to do to ensure good health is to protect the plants. Even this can be done really simply - spray plants with anything that repels insects, small rodents and birds. This can be as simple as grinding green chillies into a paste, adding plenty of water, and spraying this water on the foliage. There is another popular formulation called 3G - Ginger, Garlic, GreenChillies - which can also be used in a similar way. Be careful though, to not add more than 25ml of your spicy solution to 1 litre of water for spraying, as making the spray too strong will cause the plants pain, and make them wilt. The best way is to test your spray on a few plants, and then if all goes well, using the spray on all of them.

One more organic repellent is Agni Astram. This is slightly more complex to make as it involves boiling the ingredients together. The ingredients

are all natural though, and consist of gomutra (cow urine), neem leaves, tobacco, green chillies and garlic. There are many guides available online on how to make and use Agni Astram, any of which you can follow and/or tweak to your needs, and according to your input availability.

A full, rich, abundant, green plant enjoying the breeze is one of the best sights of beauty there is. Of all the steps that we can take to preserve this, the simplest ones are the most effective, because come to think of it, the simple things in life are the best, most natural, most sustainable and also the most cherished ones.

Ramashree Paranandi



The author Ramashree Paranandi is a partner in The Organic Farm, located near Nedumaram, TN. She consults on all aspects of the farm and often stays over for long stretches to enjoy pollution-free days with the other farm creatures. When in Chennai, she writes, teaches and sings. She can be reached at aramashree@eltconsultancy.org

"Sustainable forest management practices are crucial for preserving biodiversity and ecological balance."

Dr. Irulandi shares with Marie Banu his experience in Indian Forest Service

Dr Irulandi hails from a small village in Srivilliputtur Taluk of Virudhunagar District -Tamil Nadu. He joined the Indian Forest Service in the year 1982 and underwent Service Training in Indra Gandhi National Forest Academy at Dehradun for nearly 2 Years. On completion of his service training, he was assigned to the Tamil Nadu Cadre. From 1985, he served as the District Forest Officer in many districts, was the Conservator of Forest of Vellore Circle and the Additional Principal Chief Conservator of Forest and Head of Forestry Extension wing in Tamil Nadu Forest Department, Chennai. He retired from the Indian Forest Service in the year June 2015.

While he was heading the Forestry Extension wing of Tamil Nadu Forest Department, Forestry Extension wing activities were recognized and was awarded the "Indra Priyadarshini vrikshamitra Awards" 4 time, by Government of India. This is the highest award constituted in Forestry Sector by the Government of India. He is currently the President of Rotary club of Alandur.

In an exclusive interview, Dr. Irulandi IFS (retd.) shares with Marie Banu his experience in Indian Forest Service.

Can you explain your motivation behind joining the Indian Forest Service and why you chose this career path?

Hailing from a small village in Srivilluputtur Village, Virudunagar Taluk, my family has a background in agriculture. I pursued my graduation at Tamil Nadu Agricultural University, Coimbatore, and completed my Post Graduation at the Indian Agricultural Research Institute, New Delhi, focusing on Forest Entomology. Subsequently, I earned my doctoral degree in Forestry Extension.

During my academic journey, I had the opportunity to visit various forest areas and study vegetation for Insects Collection as part of my assignments. My visits to the Himalayas particularly ignited a profound love for nature, especially forests. Upon experiencing the beauty of the various types of vegetation, my passion for agriculture and forests has continued to grow.

Upon learning about the Indian Forest Service, I aspired to serve and conserve nature. I cleared the UPSC examination in 1982 and underwent training at the prestigious Indira Gandhi National Forest Academy in Dehradun.

What do you think are the most significant challenges faced by the forestry sector in India, and how did you address them as an Indian Forest Service officer?

Initially as a District Forest Officer, I served in 10 districts of Tamil Nadu. I also served as Conservator of Forest Vellore Circle for nearly 3 years and Jawadhu hills area is part of my Circle area.

In this, we managed the forest suits to the needs of the local Community needs as well as local forest types. The tribal Villagers are allowed to Collect Usufructs and other Minor forest Produce are allowed to Collect in the Project area and market it on their own with the guidelines of forest officials.

The original system of forest management that is dominated by tribal community is that these communities who are engaged in collection of forest produce are allowed to enjoy the produce as much as

they can only for personal consumption; the rest being handed over to the Forest department for revenue generation. Further, the support of the local community is offered a remuneration to protect the forest.

In Jawadhu hills, there is a good wealth of sandal wood. Between 1990 to 2000, the outsiders conniving with the tribals, illegally removed the entire sandal along with other timbers in this area. As an IFS officer, I tried to recreate the wealth with the cooperation of the tribals and adopted a strategy by joint forest management. We launched 'Tamil Nadu Biodiversity Conservation and Greening Project' with funding support from foreign agencies. The activities implemented through this project were aimed to benefit the tribal population. Guidelines were drawn to allow the tribals collect the usufructs, market it, and the amount approved for sale of products used for village development fund.

The revenue department and forest department are now in the process of identifying the areas to be handed over to the forest dwellers following the Forest Rights Act of 2006.

Protection of Forest resources such as Timber, wildlife, forest land from encroachment is the biggest Challenge in the Present-day Problem for Forestry Sector. However, the Forest authorities put fullest efforts to safeguard the forest wealth by legal enforcement as well as will with the participation of forest dwelling communities and the people who are living adjoining to forest area by implementing People benefits oriented Schemes.

What are your views on the integration of technology, such as remote sensing and GIS, in forest management and conservation? How would you utilize such tools to enhance your work as an Indian Forest Service officer?

The integration of technology, particularly remote sensing and GIS, has been a game-changer in forest management and conservation. In Tamil Nadu, we have been utilizing GIS for the past 15 years, primarily for mapping and analyzing various aspects of forest management.

A dedicated GIS unit was established long ago to support forest management practices, such as detecting occurrences of forest fires, identifying encroachments on forest land, combating illegal poaching and mining activities, and conducting advanced mapping and spatial analytics for forest vigilance purposes.

As an Indian Forest Service officer, harnessing these tools enables me to make informed decisions, enhance the effectiveness of forest management strategies, and promote better conservation practices.

What steps can we take to promote sustainable forest management practices and conservation of biodiversity?

Sustainable forest management practices are crucial for preserving biodiversity and ecological balance. The United Nations has formulated forest management practices as part of the Sustainable Development Goals, and in Tamil Nadu, the Forest Department has established a Sustainable Development cell to oversee various forest management issues, including protection, encroachment, and mining.

Originally, we thought we can manage the forest ourselves with the support of the local communities. It is a herculean task as our population has expanded multifold and the forest areas is less.



The Forest and Trees Cover of Tamil Nadu State is only 23.8% which is Slightly Lower than the National Forest policy 1988 target of 33%. To address the challenge of low forest cover, initiatives like the Tamil Nadu Biodiversity Conservation and Greening Project have been instrumental in creating tree wealth outside forest areas, including wastelands, roadsides, and community lands.

To reduce the gap, large scale tree planting activities have been undertaken by Forest Extension wing of Tamil Nadu Forest Department which I led for nearly 15 years. The main function of this wing is to educate and motivate the People to grow trees in Community lands, agroforestry, etc so as to improve the Tree Cover of the State. Further this wing brought the Public Closer to the forest Department. Otherwise, forest Department was functioning in isolation without much Connection with Public.

How could we balance the needs of the local Community who depends on forest resources for their Livelihood with Conservation goals?

To strike a balance between the needs of local communities and conservation goals, certain initiatives have been implemented:

- Empowering local communities: Providing local forest communities with the autonomy to collect and market Minor Forest Products allows them to sustain their livelihoods while still adhering to conservation principles.
- Forest Schools and education: Establishing Forest Schools to educate Tribal Children not only imparts knowledge but also fosters an understanding of sustainable forest practices and the importance of conservation.
- Involvement in Ecotourism: Engaging Forest Dwelling Communities in Ecotourism management Committees and tourism activities provides them with income-generating opportunities that can be aligned with conservation objectives.
- Employment opportunities: Offering employment to tribal youths in Forest Protection activities and integrating them into regular forest establishments not only improves their livelihoods but also fosters a sense of ownership and responsibility for forest conservation.
- By combining these approaches, we can harmonize the needs of local communities with the overarching goal of sustainable forest management and biodiversity conservation.