



Let's work for Mother Nature

पर्यावरण PERSPECTIVE

June-July 2021
Not For Sale

पर्यावरण की अकुलाहट

05

An opportunity for India

12

धरती को दें साँसें
11

Towards sustainable
environment
28

S T E P T O N G

सच्ची पर्यावरण संरक्षक है 'गृहिणी'	4
पर्यावरण की अकुलाहट	5
कैच द रेन : आओ, मिलकर करें तालाबों की चिंता	6
चमोली हादसा : प्रकृति के सामने हमेशा बौने रहेंगे हम	7
मकई की भूसी का ईको फ्रेंडली पेन	8
छानीबड़ी में फिर से नाच उठे 'मोर'	9
पंद्रीनाथ कुंड को स्वयंसेवकों के दिया पुनर्जीवन	10
धरती को दें साँसें	11
Climate Change: An opportunity for India	12
Environment: Catch them young	14
Kadha: An essential prescription	15
Plantation: Save for oxygen	16
Kalor: Truly novel	17
Groasis Waterbox: A technological marvel!	18
Wasteland: Will is all that matters	19
Ponds' Rejuvenation: Standing for a cause	21
Yogic Farming: A philosophical vision into practical farming	22
Wetlands: A must for bio-diversity	24
Wasteland: Restore to rejuvenate	26
Sarthak's Bhopal Model: Towards sustainable environment	28



**EDITOR-IN-CHIEF**

Rajesh K Rajan

CONSULTING EDITOR

Dr Atanu Mohapatra

EDITOR-ENVIRONMENT

Dr Dhiraj Kumar Singh

EDITOR ENGLISH

Dr Subhash Kumar

EDITOR HINDI

Ankur Vijaivargiya

EDITORIAL TEAMLokendra Singh
Dipti Sharma
Kavita Mishra**CREATIVE & GRAPHICS**

Alekha S. Nayak



09

**संपादकीय****तीसरी लहर की आशंका, पर हौसले बुलंद**

इस सदी की सबसे बड़ी मानवीय त्रासदी कोरोना ने मानवता को विनाश के दहलीज पर लाकर खड़ा कर दिया है। इस महामारी का दूसरा चरण अभी पूरी तरह खत्म भी नहीं हुआ है की इसकी तीसरी लहर के आने की चर्चा होने लगी है। इसके साथ नई नई चुनौतियाँ भी और मानवीय मूल्यों और करुणा का इम्तिहान भी हो रहा है। समाज-शास्त्र की मूल धारणा 'मनुष्य एक सामाजिक प्राणी है' की भी अग्रि परीक्षा हो रही है कि हम में से कौन इस 'सामाजिक' टैग की सार्थकता को बनाये हुए हैं और कौन इसे मिटाने पर आमादा है। कुछ लोग अपनी जान को जोखिम में डाल बढ़ चढ़ कर लोगों की मदद करने के लिए आगे आ रहे हैं और दूसरी तरफ ऐसे भी किस्से सामने आ रहे हैं कि हम में से ही कई इस मौके का फायदा उठा जमाखोरी, कालाबाजारी, और तमाम अनैतिक हथकंडे अपनाने में लग गए हैं। इंसान और हैवान का फर्क मिटाने पर उतारू हैं। ऐसे में पंचतंत्र का एक संस्कृत श्लोक बरबस ध्यान में आ जाता है: "यानि कानि च मित्राणि, कृतानि शतानि च। पश्य मूषकमित्रेण, कपोताः मुक्तबन्धनाः॥" (मतलब लोगों को हमेशा ही सैकड़ों मित्र बनाना चाहिये। कैसे एक छोटे से चूहे ने मित्र कबूतर के खातिर जाली काटकर उसे मुक्त कर दिया था ये कहानी हम सब को तो पता ही है।) सही भी है, मुसीबत में कौन कब किसके काम आ जाये किसे पता? पर मित्र बनाना आज कल के उपभोक्तावाद वाले युग के मतलबी लोगों के बीच आसान नहीं। और कैसे बनाए जाएं मित्र? किसी को मित्र बनाने से पहले स्वयं को उसका मित्र बनाना पड़ता है और किसी के मुसीबत के वक्त काम आकर स्वयं को मित्र होने की प्राप्ता और प्रासंगिकता साबित करनी पड़ती है; एक दूसरे के काम आना ही तो पारस्परिकता है। पारस्परिकता और सहयोग ही मानवता का सार भी है और प्रमाण भी। और इसी ने सृष्टि के प्रारंभ से अब तक मानवता के अस्तित्व को बचाये रखा है। इतिहास गवाह है जब जब हमारे अस्तित्व पर संकट मंडराया है हम मजबूती के साथ एक दूसरे का दामन थाम संकट से उबर कर आये हैं। तुलसी दास जी ने रामचरित मानस में ठीक ही लिखा है "परहित सरिस धरम नहीं भाई।" मतलब परहित ही मानवता का सबसे बड़ा धर्म है और यही वजह है कि मनुष्यता इस कलयुग में भी बची हुई है। कोरोना के हालात में सुधार दिखने लगा है। पर ये हमेशा के लिए गांठ बांध लें कि आने वाले 2 साल तक हमें सावधान की स्थिति में हमेशा रहना है और कोरोना के सारे प्रोटोकॉल का अक्षरशः पालन भी करना है। If winter comes, can spring be far behind!

-राजेश कुमार राजन



सच्ची पर्यावरण संरक्षक है 'गृहिणी'

डॉ नीरोतिमा

आ-

ज जब देश-दुनिया में पर्यावरण संरक्षण को लेकर अंतरराष्ट्रीय गोष्ठियां, विमर्श, रैलियां इत्यादि आयोजित कर रहीं हैं, तब हम यह विचार करना भूल जाते हैं कि पर्यावरण संरक्षण में एक सामान्य गृहिणी कितनी महत्वपूर्ण भूमिका निभाती है या निभा सकती है? इस सामान्य गृहिणी से पर्यावरण संरक्षण के प्रयोग सीखने की आवश्यकता है। वह अपने दिनभर के छोटे-बड़े कामों के दौरान पर्यावरण संरक्षण का काम करती रहती है। यह बात कई बार उसको भी पता नहीं होती क्योंकि पर्यावरण संरक्षण उसका सहज व्यवहार है।

एक गृहिणी कैसे करती है पर्यावरण संरक्षण, ज़रा ध्यान दें-

- सामान के साथ आई प्लास्टिक की थैलियों को कूड़े में न फेंककर उन्हें जमा करना और पुनः उपयोग में लाना।
- प्लास्टिक के चम्मच, कटोरी और प्लेट का उपयोग नहीं करना।
- लोहा, गते के टुकड़े, काँच की बोतलें, प्लास्टिक व टिन के डिब्बे को कचरे में न फेंक कर उनको एकत्र करना और रद्दीवाले को बेच देना। ऐसा करके वह पर्यावरण को भी सुरक्षित करती है और कुछ पैसे भी उसके हाथ आते हैं।
- अपने मोबाइल के लिए प्लास्टिक का कवर न खरीद कर उसे मोती-सिपियों की बनी गुथली में सजाती है।
- बालों को संवारने के लिए भी प्लास्टिक की जगह लकड़ी की कच्ची का उपयोग करती है। माथे को बैलवेट की बिन्दियों से नहीं कुमकुम से सजाती है। होठों पर लिपस्टिक की जगह दन्दासा (अखरोट की छाल का दातुन) का उपयोग।
- आरओ से निकले पानी को कपड़े धोने के लिए उपयोग में लाना।
- घर में तुलसी सहित अन्य पौधों की देख-संभाल। घर के गमलों में धनिया, पुदिना, मिर्च व टमाटर उगाकर।
- बच्चों की पुरानी किताबें जरूरतमंद परिवारों को सौंप देना।
- सब्जी लेने के लिए बाज़ार में कपड़े का थैला लेकर जाना।

पर्यावरण की अकुलाहट

विजया रायकवार

जल, जंगल, जमीन,
वायु और धनि
किस-किस ने इनकी
अकुलाहट सुनी।

जल जीवन में जरूरी
काश इसे स्वच्छ रख पाते
प्राण दायिनी नदियों में
अध जले शव नहीं बहाते।

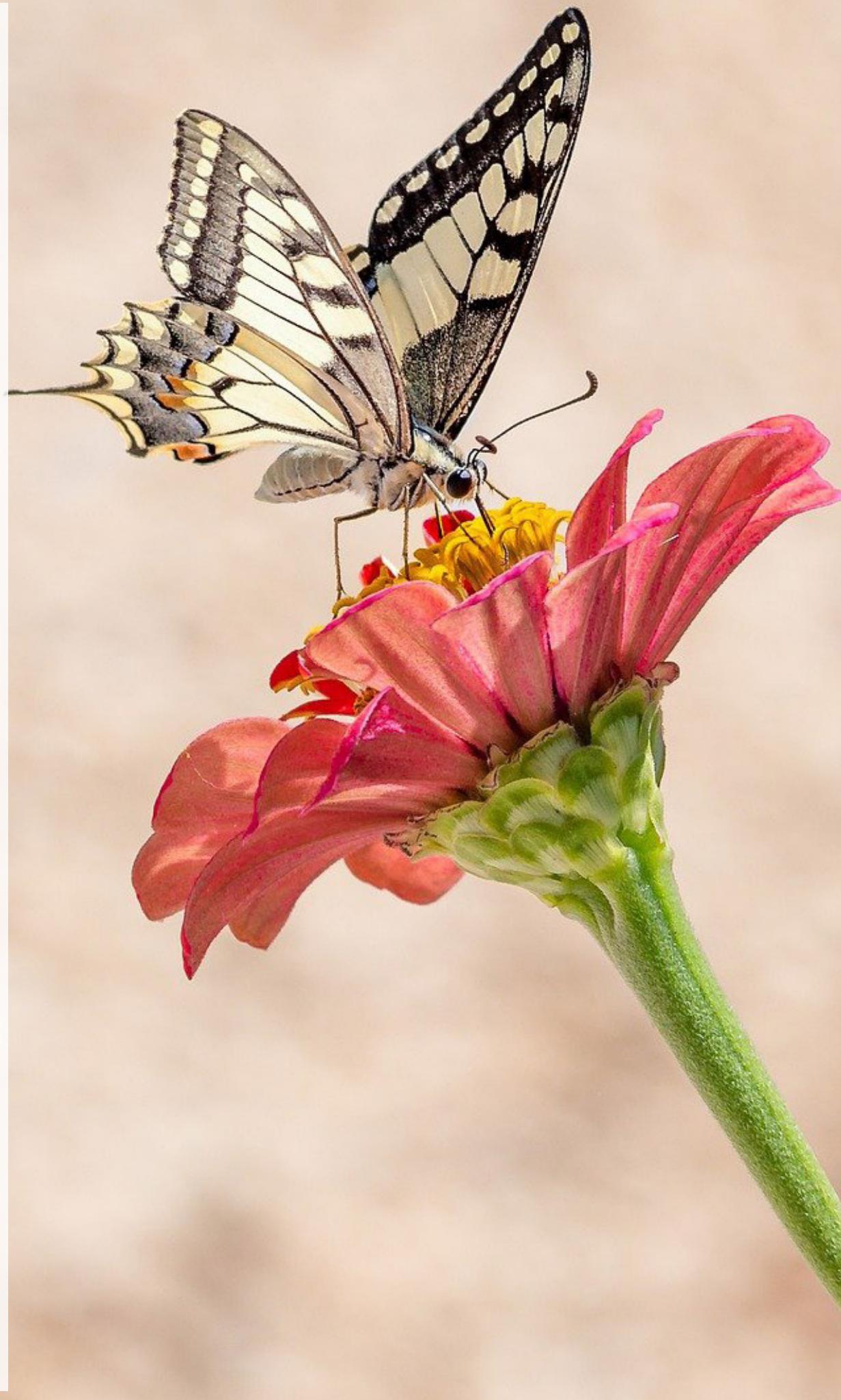
पेड़ों से ही पलता जीवन
खानपान और जड़ी बूटियां
पंछी को छाया मिले सदा
पशु भी आश्रय पाते।

जमीन से जुड़े जन भी
अब अन्न नहीं उपजाते,
कांक्रीट के जंगल बोकर,
नोटों की फसल उगाते।

प्राणवायु अब खत्म हो रही
जिम्मेदार अब कौन,
वायुमंडल दूषित हुआ
जनमानस है मौन।

आओ हम सब पेड़ लगा लें
पृथ्वी को फिर से सजा लें
पर्यावरण की अवधारणा के घटकों को,
पुनर्स्थापित कर लें।

जल, जंगल, जमीन
और धनि की अकुलाहट समझें
लें शपथ, करें प्रतिज्ञा
पर्यावरण का संरक्षण कर लें
संवर्धन कर ले...





कैच द रेन :

आओ, मिलकर करें तालाबों की चिंता

पर्यावरण टीम

जल अनमोल प्राकृतिक संपदा है। यह प्रकृति से किसी वरदान के रूप में संपूर्ण जगत को प्राप्त है। हमारी पृथ्वी पर 71 प्रतिशत जल है, परंतु इस समूची मात्र का 2.6 प्रतिशत पानी ही पीने योग्य (मीठा जल) है। इसमें 1.8 प्रतिशत भाग बर्फ के रूप में उपस्थित है एवं मानव को उपभोग हेतु सिर्फ 0.8 प्रतिशत भाग जल ही मिल पाता है। इसलिए जल का संभलकर उपयोग करना चाहिए। बारिश का मौसम जल संरक्षण का बड़ा अवसर लेकर आता है। इस बारिश में हमें पानी की एक-एक बूंद को भविष्य के लिए सहेजना है। तालाब इसमें हमारे सबसे बड़े सहयोगी हो सकते हैं।

वर्ष जल के संचयन के लिए हमें न केवल नये तालाबों का निर्माण करना चाहिए अपितु पहले से बने तालाबों को तैयार करना चाहिए। पहले से बने तालाबों का सीमांकन, उनका गहरीकरण एवं जीर्णोद्धार समय की आवश्यकता है। ये तालाब न केवल वर्षा जल का संचयन करते हैं बल्कि भूजल स्तर को भी बढ़ाते हैं। बारिश से पूर्व तालाबों का गहरीकरण, साफ़-सफाई और जीर्णोद्धार करना हमारी संस्कृति का हिस्सा भी रहा है। जल संरक्षण में तालाबों की भूमिका के महत्व को ध्यान में रखकर ही इसे पूर्वजों ने संस्कृति का हिस्सा बनाया था।

शहरों एवं गाँवों में पहले से बने तालाबों को फिर से जीवंत करना होगा। तालाब निर्माण और रखरखाव में जनभागीदारी समितियों की महत्वपूर्ण भूमिका हो सकती है। पंचायतों में सक्रियता, शासन का सहयोग और जनभागीदारी से मृतप्रायः तालाबों का कायाकल्प किया जा सकता है। सामाजिक संस्थाओं को भी जल संरक्षण के अभियान से जोड़ कर तालाबों के गहरीकरण एवं जीर्णोद्धार के लिए प्रेरित किया जा सकता है। समाज की सामूहिक भागीदारी से ही हम जल संरक्षण एवं तालाब के प्रति स्थायी जागरूकता एवं दायित्वबोध को पैदा कर सकते हैं। 'बारिश की बूंदों' को सहेजने के लिए हमें दृढ़ संकल्प लेना होगा।

चमोली हादसा

प्रकृति के सामने हमेशा बौने रहेंगे हम

प्रिंस कुमार सिंह

उत्तराखण्ड के पहाड़ों में रहने वाले लोग 7 फरवरी, 2021 का दिन कभी नहीं भूल पाएंगे। वैसे तो पहाड़ों में रहने वाले लोगों के लिए प्राकृतिक आपदाएं कोई नयी बात नहीं होती है लेकिन 2013 के केदारनाथ हादसे के बाद के सबसे बड़े हादसों में शामिल चमोली हादसा दर्द के साथ सबक देकर गया है। यह हादसा लगभग 200 लोगों का जीवन लील गया और कई लोग घायल एवं लापता हो गए।

हादसे के बाद से ही बड़े पैमाने पर हुई तबाही के बारे में अनुमान लगाना शुरू कर दिया गया। सरकार एवं संस्थाओं ने अध्ययन शुरू कर दिया। सामान्य चर्चाओं में ग्लोबल वार्मिंग को हादसे का प्रमुख कारण बताया जाने लगा। इसके साथ ही यहाँ भी कहा गया कि पहाड़ों के ऊपर अस्थाई झीलों के निर्माण की वजह से हादसा हुआ। हालांकि एक नया शोध सामने आया है, जिसमें इस हादसे के लिए बाकी अंदाजों से बिल्कुल इतर दूसरा कारण बताया गया है।

हादसे का वास्तविक कारण :

साइंसमैग में प्रकाशित एक शोध रिपोर्ट के अनुसार, इस दर्दनाक आपदा के लिए हिमस्खलन और एक विशाल चट्टान जिम्मेदार थी। सैटेलाइट की तस्वीरें, भूकंपीय रिकॉर्ड, न्यूमेरिकल मॉडल्स और प्रत्यक्षदर्शियों के वीडियो के आधार पर इस अध्ययन में शामिल शोधकर्ता इस निष्कर्ष तक पहुंचे।

गीजा के पिरामिड से 10 गुना वजनी था मलबा :

शोध टीम के अनुसार, यह हादसा 180 मीटर मोटी और 500 मीटर चौड़ी ग्लेशियर के बर्फ की एक चादर अचानक टूट कर गिरने से हुआ। रिपोर्ट में यह बताया गया है कि उत्तराखण्ड के चमोली ज़िले के 6 किलोमीटर ऊंचे शिखर रोटी पीक पर जब ये चादर टूटा तो उसके बाद लगभग 2.7 करोड़ क्यूबिक मीटर सामग्री एक मिनट तक मुक्त होकर गिर रही थी। यह मलबा इतना भारी था कि इसका वजन गीजा के महान पिरामिड से दस गुना अधिक था।

उत्पन्न हुई परमाणु बम विस्फोट से भी अधिक ऊर्जा :

यह मलबा जब दो किलोमीटर नीचे गिरा तो इससे इतनी अधिक ऊर्जा निकली की समूची बर्फ पिघल कर पानी बन गई। जब ये नीचे रोटी घाटी में गिरी तो हिरोशिमा पर गिराए गए परमाणु बमों से 15 गुना अधिक ऊर्जा निकली। सामान्य तौर पर चूरा-चूरा हुए द्रव्यमान को अपनी जगह पर ही

रहना चाहिए था लेकिन ऐसा नहीं हुआ और यह नीचे की ओर बढ़ता चला गया।

इस मलबे में हिमनाद मिलने की वजह से इसने ऐसी नदी का रूप ले लिया जो बेहद तेजी से नीचे जा रही थी और अपने आगोश में सबको समेट रही थी। प्रकृति के इस प्रकोप के सामने हजारों करोड़ रुपए की लागत से बनाये जा रहे डैम और हाइड्रोइलेक्ट्रिक प्रोजेक्ट भी क्षणिक टिक ना सके।

हमें सीखना होगा प्रकृति का आदर करना :

ऐसे हादसे हम मनुष्यों को बार-बार यह सिखाते हैं कि हमें प्रकृति का आदर करना होगा। मनुष्य लाख टेक्नोलॉजी की बात करे ले, कितने ही ऊंचे डैम बना ले लेकिन हम प्रकृति के रास्तों को नहीं रोक सकते। हालांकि हम विकास कार्यों को भी नहीं रोक सकते लेकिन सरकारों को भी यह जरूर सोचना होगा कि अत्यंत जरूरी ना होने पर प्रकृति के साथ खिलवाड़ ना किया जाए।

अगर पहाड़ों में आधारभूत संरचना बनाने की जरूरत पड़े तो इसे इकोफ्रेंडली तरीके से तैयार किया जाए। अन्यथा प्रकृति अपने विरुद्ध निर्मित हुए सब निर्माणों को ध्वस्त कर देगी और हम सब प्रकृति के सामने हर बार बौने साबित होंगे।





मकई की भूसी का इको फ्रेंडली पेन

पर्यावरण टीम

दुनियाभर में पर्यावरण संरक्षण के लिए बड़े स्तर पर कई कदम उठाए जा रहे हैं। कई लोग ऐसे भी हैं, जो अपने स्तर पर छोटा ही सही, लेकिन सार्थक कदम उठाकर पर्यावरण की रक्षा कर रहे हैं। तेलंगाना के वारंगल स्थित गोपालपुरम निवासी राजू मुप्परपु भी ऐसे ही लोगों में शामिल हैं। अपने छोटे-छोटे प्रयोगों के लिए चर्चित राजू फिलहाल अपने इको-फ्रेंडली पेन के आविष्कार को लेकर चर्चा में हैं, जो उन्होंने मकई की भूसी से बनाया है।

राजू मुप्परपु हमेशा से पर्यावरण प्रेमी रहे हैं। यहीं वजह है कि उन्होंने पर्यावरण संरक्षण एवं संवर्धन को ध्यान में रखकर अपने आविष्कार करते हैं। उन्होंने अपनी मेहनत और सोच के दम पर सेंसर से चलने वाली स्ट्रीट लाइट और बैटरी से चलने वाली साइकिल का आविष्कार किया। उनके नवाचारों का पहिया कभी रुका नहीं। हाल ही में राजू मुप्परपु ने एक अनोखा आविष्कार किया है। उन्होंने मकई की भूसी से एक पेन तैयार किया है, जिसे उन्होंने नाम दिया है- इको फ्रेंडली पेन।

राजू ने देखा कि उसके गाँव और आसपास के क्षेत्र में किसान मकई की खेती करते हैं। ये किसान फसल की कटाई के बाद उसकी भूसी को जलाकर नष्ट कर देते हैं। असल में मकई की भूसी किसानों के अधिक काम की नहीं होती है। मकई को जलाने से धूंआ निकलता है, जिससे पर्यावरण को नुकसान भी होता है। यह सब देखकर राजू ने इसका समाधान निकालने की देशा में विचार करना शुरू किया। तब उनके दिमाग में मकई की भूसी से इको-फ्रेंडली पेन बनाने का विचार आता है। पेन बनाने का हुनर राजू ने अपने स्कूल के समय में सीखा था। उन्हीं सब बातों को ध्यान में रखते हुए और भूसी को सिलिंड्रिकल शेप में ढालकर राजू ने इको-फ्रेंडली पेन बनाया।



राजू मुप्परपु अभी तक 100 से भी ज्यादा पेन बना चुके हैं। उनके डिस्पोजल पेन बनाने से प्लास्टिक के कचरे को कम करने और मकई की भूसी को जलाने से रोकने में मदद मिल रही है। राजू के अनुसार इस इको-फ्रेंडली पेन से लिखने में कोई परेशानी नहीं होती, यह बिल्कुल सामान्य पेन की तरह होता है। सबसे पहले राजू ने अपने बनाए पेन पड़ोसियों और दोस्तों में बांटे तो उन्हें यह पेन खूब रास आया। राजू को इस पेन को बनाने में मात्र 10 मिनट का समय लगता है और सारे पेन वे खुद बनाते हैं।

फोटो:- मुकेश शर्मा, पर्यावरण प्रहरी, छानीबड़ी।



छानीबड़ी में फिर से नाच उठे 'मोर'

रामेश्वरी देवी

एक समय छानीबड़ी ग्रामीण अंचल में हजारों मोरों की उपस्थिति थी। समय के साथ ये कम होते गए। इनकी कमी के पीछे अनेक कारण रहे। गांव में माँसाहारी और शिकारी कुत्तों की संख्या बढ़ना, बीज उपचार में जहरीले कीटनाशक का उपयोग और उनके पर्यावास पीपल एवं बरगद के पेड़ों का समाप्त हो जाना। इन मूक पक्षियों के लिए स्थिति इतनी विकट हो गयी कि 2005 तक इनकी संख्या केवल 5-7 रह गई। ऐसे समय में पर्यावरण प्रहरी मुकेश शर्मा इन पक्षियों के लिए देवदूत के रूप में आये। उनके प्रयासों से एक बार फिर इस क्षेत्र में मोरों की संख्या बढ़ रही है।

मुकेश शर्मा ने राष्ट्रीय पक्षी मोर के संरक्षण के लिए प्रयास प्रारंभ किये। उनके प्रयासों से ही मोर संरक्षित करने के उद्देश्य से 'मयूर पक्षी पोषण' संस्था बनायी गयी। मोर संरक्षण के प्रति आई जागरूकता के परिणामस्वरूप इस क्षेत्र में मोरों को बचाने के लिए एसीएफओ दलीप सिंह जी राठौड़ के नेतृत्व में एक टीम गठित की गई है, जो राष्ट्रीय पक्षी को बचाने में अपनी महत्वपूर्ण भूमिका का निर्वहन कर रही है। हनुमानगढ़ जिले के वन अधिकारी इस संदर्भ में सक्रिय भूमिका निभा रहे हैं।

मोर संरक्षण के लिए 'मयूर पक्षी पोषण' संस्था ने वन विभाग की 20 बीघा भूमि पर तारबन्दी कराई और मोरों की संख्या बढ़ाने के लिए 16 प्रजनन केंद्र बनवाये। वन अधिकारी भी इस संस्था के कार्यकर्ताओं का सहयोग करते हैं।

जिले में 2020 की गणना के अनुसार 2038 मोर हैं। स्थिति अभी भी बहुत संतोषजनक नहीं है। हालांकि हनुमानगढ़ जिले में वर्ष 2019 की बजाय वर्ष 2020 में मोरों की संख्या बढ़ी जरूर है मगर अभी भी इनको बढ़ावाने और प्रजनन केंद्र स्थापित करने की आवश्यकता है। छानीबड़ी में भी मोरों की संख्या में वृद्धि हुई है।

पर्यावरण प्रहरी मुकेश शर्मा का मानना है कि पिछले 15 वर्षों से संस्था ने अनवरत कार्य किया है। यही कारण है कि छानीबड़ी में जहाँ वर्ष 2005 में मोरों की संख्या मात्र 5-7 तक सिमट कर रह गई थी, वहाँ अब अब यह संख्या 150 से भी अधिक हो गई है। क्षेत्र से पहले गिर्द और चील लुप्त हुए, अब ऐसा ना हो कि राष्ट्रीय पक्षी मोर भी लुप्त हो जाएँ। समय रहते हमें अपने राष्ट्रीय पक्षी के संरक्षण के प्रयासों को और अधिक गति देनी चाहिए।



पंद्रीनाथ कुंड को स्वयंसेवकों ने दिया पुनर्जीवन



कविता मिश्रा

राष्ट्रीय स्वयंसेवक संघ के कार्यकर्ता समाजजीवन के प्रत्येक क्षेत्र में आगे आकर अपनी जिम्मेदारी का निर्वहन करते हैं। पर्यावरण संरक्षण की दिशा में भी स्वयंसेवक पीछे नहीं हैं। महाकाल की नगरी उज्जैन के ऐतिहासिक बड़नगर में स्वयंसेवकों ने लोकमाता देवी अहित्याबाई द्वारा बनवाए गए पंद्रीनाथ कुंड की साफ़-सफाई, जीर्णोद्धार और सौंदर्योक्तरण करने अनुकरणीय उदाहरण प्रस्तुत किया है।

बड़नगर में सुशासन की मूर्ति राजमाता अहित्याबाई होल्कर ने 18वीं शताब्दी में जल संचयन के लिए पंद्रीनाथ कुंड बनवाया था। वर्ष 1990 में तत्कालीन विधायक द्वारा इस ऐतिहासिक कुंड का जीर्णोद्धार एवं सौंदर्योक्तरण कराया गया। परन्तु उसके बाद से यह कुंड एक बार फिर अनदेखी का शिकार हो गया। लम्बे समय से कुंड की सफाई नहीं की गई, जिसके कारण कुंड में कूड़े ने अपनी जगह बना ली थी। राष्ट्रीय स्वयंसेवक संघ के कार्यकार्ताओं ने जब इस धरोहर को बदहाल देखा तो उन्होंने इसकी साफ़-सफाई और जीर्णोद्धार का संकल्प ले लिया। स्वयंसेवकों की टोलियों ने योजना बनाकर यहाँ नियमित श्रमदान करने की योजना बनायी। कोरोना संक्रमण की इस महामारी में भी उन्होंने अपने कार्य को अधूरा नहीं छोड़ा। चटकती तेज धूप में निकलता पसीना भी उनके इरादों को सुस्त नहीं कर सका। स्वयंसेवकों ने पूर्ण उत्साह और उमंग के साथ अपने इस कार्य को जारी रखा। उनके मन में बस में एक ही ललक थी कि अपनी पौराणिक धरोहर और जल-संरचना को पुनर्जीवित करना है। इसी जज्बे के साथ सुबह शाम से लेकर देर रात तक 35 महाविद्यालय विद्यार्थी स्वयंसेवक जुटे रहे। लगातार 6 दिन काम करके उन्होंने इस कुंड की सूरत ही बदल दी।

अपनी जल-संरचनाओं के संरक्षण के लिए इस प्रकार श्रमदान करना भारत की परंपरा में रहा है। उल्लेखनीय है कि इस प्रकार की जल-संरचनाएं भारत में प्रमुखता से पाई जाती हैं। यह भारत के शुष्क क्षेत्रों में काफी लोकप्रिय रहा है। इसका उपयोग वर्षाजल संग्रहण एवं पीने के पानी के लगातार उपलब्धता के लिये किया जाता है। इस प्रकार के कुएँ बनाने का विचार सूखे की समस्या के कारण आया। इनके विभिन्न क्षेत्रों में उनके नाम अलग-अलग हैं जैसे काव, वावड़ी, बावरी, बादली एवं बावड़ी। इनकी मंदिरनुमा संरचना एवं जल उपलब्धता के लिये महत्ता को ध्यान में रखते हुए इन्हें जलमंदिर भी कहा जाता है।

हमें यह भी स्मरण रखना चाहिए कि साहित्य से लेकर परम्पराओं तक भारतीय मनीषियों ने जल और जीवन के तारतम्य को बखूबी समझा और समझाया है। हड्ड्या काल से लेकर मुगल काल तक जल को संग्रहित करने और उसके बेहतर उपयोग के लिये एक से बढ़कर एक तरकीबें विकसित की गईं और इनमें से अनेक अब भी हमारे बीच मौजूद हैं। भारत में जल संरक्षण का एक समृद्ध इतिहास है। यहाँ जल संरक्षण की मूल्यवान सामाजिक एवं सांस्कृतिक परम्पराएं हैं। देश के अलग-अलग हिस्सों में वहाँ के अनुसार जल संरक्षण के लिए नदी, खादिन, तालाब, जोहड़ और कुँआ इत्यादि तरीकों को अपनाया गया।

धरती को दें साँसें

अंकिता पाण्डेय

जि स प्रकार किसी भी प्राणी को जीवित रहने के लिए सांस लेने की आवश्यकता होती है, ठीक उसी प्रकार हमारी धरती, जो हमें जीवन जीने के लिए पर्याप्त साधन प्रदान करती है, उसे भी सांस लेने की उतनी ही आवश्यकता है। धरती सांस लेती है, हरे-भरे पेड़-पौधों से, नन्ही कलियों से, पेड़ की जड़ों और धूप की रोशनी से। यह सांस लेती है जब वर्षा की फुहार इसके खेत-खलिहानों की प्यास बुझाते हैं, जब स्वच्छ पावन नदियां अपनी गति में मदमस्त बहती जाती हैं, जब उसकी कोख में मनुष्य के साथ ही अन्य जीव भी जीवनयापन करते हैं।

महात्मा गांधी ने कहा था कि धरती के पास लोगों की आवश्यकताओं को पूरा करने के लिये पर्याप्त संसाधन हैं, लेकिन एक भी व्यक्ति के लालच को पूरा करने के लिए पर्याप्त संसाधन नहीं हैं। अफसोस कि इस धरती ने मनुष्य की लालसा का बोझ उठाते-उठाते दम तो नहीं तोड़ा परंतु इसकी पीठ ज़रूर झुक गई है। हम धरती की छाती पर बैठकर उसका ही गला घोंट रहे हैं क्योंकि हम अपने लालच में इस तरह झूबे हुए हैं कि यह होश ही नहीं रहा कि हम किस तरह प्रकृति का दोहन करने लगे हैं।

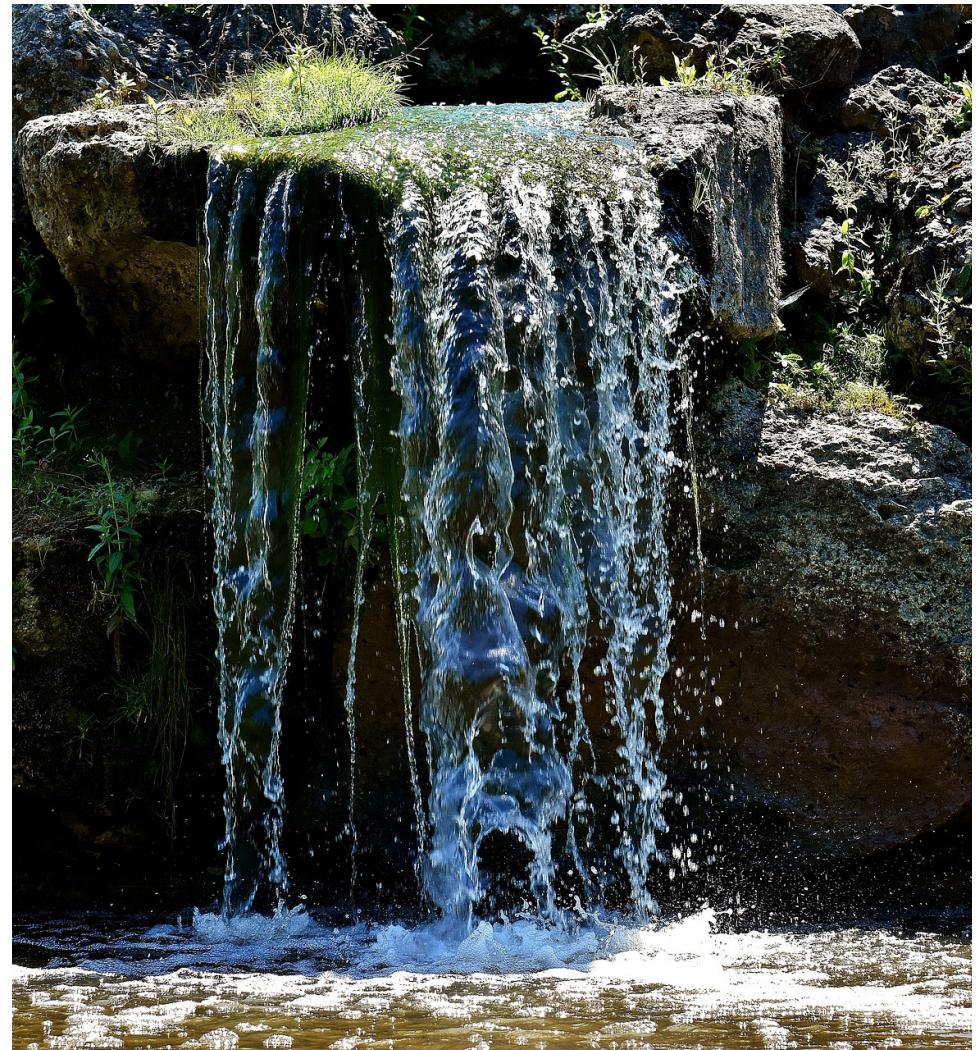
मनुष्य चाहे तो अपने जरा-से योगदान से न केवल इस धरती को बल्कि स्वयं को और आगे आने वाली पीढ़ी के लिए एक बेहतर, स्वच्छ और खुशहाल जीवन दे सकता है। जरूरत है तो बस कुछ छोटी बातों का ध्यान रखने की।

हमारी धरती जिसे जल की अधिकता के कारण 'ब्लू प्लैनेट' कहा जाता है, उसमें केवल 2.5% पानी ही पीने योग्य है। इस पर भी जलवायु परिवर्तन, प्रदूषण और जल के दुरुपयोग की वजह से प्राकृतिक जल संसाधनों पर गहरा प्रभाव पड़ा है। क्यों न हम अपने स्तर पर जल संरक्षण के प्रयास करें, इसके लिए हमें अधिक कुछ नहीं करना, बस छोटी-छोटी बातों को जीवन का हिस्सा बना लेना है। जैसे-

- हम अपने घर और आसपास हो रही पानी की बर्बादी को रोकें।
- जल का पुनः प्रयोग करें।
- बारिश में छत के पानी को सहेजें। इससे भूजल स्तर भी बढ़ेगा।
- भूगर्भ जल का रक्षण करें।
- समाज को साथ लेकर तालाब, जलाशय, कुंड आदि की सफाई करें।

जल संरक्षण के अलावा जितना हो सके उतने पौधे लगाएं, पेड़ों को कटने से बचाएं, सार्वजनिक यातायात का प्रयोग करें, बिजली का कम प्रयोग करें और प्लास्टिक को उपयोग में लाने से बचें। यदि संभव हो तो अपने घरों में सोलर पैनल भी लगवाएं।

यह बातें तो सभी ने बचपन से ही अपने किताबों में पढ़ी होंगी पर अफसोस कि इसको अमल में लाने के लिए लोगों का जीवन निकल जाता है। हमारे लिए इस धरती का ऋण चुका पाना तो नामुमकिन है परंतु यदि हम केवल अपने हित के लिए ही सही, थोड़ा-सा प्रयास करें तो यही इस धरती को स्वस्थ रखने के प्रति हमारा योगदान होगा।





Climate Change

An opportunity for India

In order to avert the disastrous consequences of climate change, we need to reduce the global temperature further down to 1.5°C

By Surabhi Tomar

Afew years back, our world's temperature was increasing every year by about 4°C which came down to 3°C per year. While this reduction in temperature is good, but it is still disastrous as the Arctic, Antarctica and Himalayan ice will melt even at this rate, draining all ice into the oceans. We have already witnessed the Uttarakhand floods as its first and immediate consequence. The source of our rivers, Himalayan ice is already melting, with droughts and floods already staring at the very face of our farmers.

If we want to avert the disastrous impacts of climate change, which may cause various of our coastal cities going underwater, drought-like situations in all of North India, all rivers emanating from the Himalayas drying up, we would require to reduce the global temperature further down to 1.5°C.

To achieve this, we would have to reduce carbon foot-prints/emissions. Greenhouse gases trap the Sun's heat and heat our Earth. We have to reduce global emissions by 50 percent by 2030 and go to zero emissions by 2050. Currently, 81% of the energy needs worldwide come from fossil fuels like coal. And it's a matter of grave concern that this percentage has not changed in last many years.

Though India theoretically lies towards the lower end of this spectrum, we meet about 78.9% of our energy needs through

thermal or coal which stood at 75.9% last year. Here lies a big opportunity for India. From the current 78.9% down to net zero emissions, we need innovations and systems that will drive economic growth, increase longevity and provide a better life for our citizens.

Mere policy interventions/restrictions on carbon emissions might not help us achieve the zero emission target. But by combining it with some kind of stimulus for alternative energy sources and funding innovations, we can create new markets, spurring a big growth. Policy restrictions on carbon emissions without alternatives can also invite resistance from the society. As a consequence, the energy deficit thus caused can have negative impacts like black-marketeers and smugglers would come up. We can pre-empt this deficit by funding innovations and announcing stimulus and investments packages to encourage alternative energy sources development.

The last century saw the economy being driven by Industries, manufacturing and later digital firms but future lies with the renewable or alternative energy sector for economic growth. The more we attempt to replace fossil fuels with renewable, clean or alternative sources of energy, the more we would prompt innovation and R&D which in turn, would stimulate startups and entrepreneurs whether high-tech or grassroots. Zero-emission target will entail adoption of new technologies, innovations and in many places going back to our cultural and traditional methods. Large spread adoption of this will disrupt the economic landscape with creation of jobs and new markets.

China is currently setting itself up as the powerhouse for clean energy. India is in a geographic advantage to be able to compete with China on this topic. We have large land areas that are ideal for solar and wind farms. We have many universities that with proper direction can lead the innovation, research and entrepreneurship.

If we look at the case study of how United States, South Korea, China and EU used green investments after the global financial crisis of 2008 to recover their economies and create jobs, we will have a better idea for our future roadmap. The fact that these four economies focussed about one-sixth of their



stimulus packages after 2008 largely to green initiatives and research which eventually helped them build new industries, create jobs and recover their economy.

To give China competition in clean energy, India needs to ramp up its investment in the innovation and startup ecosystem. Globally, by 2035 we need more than USD 50 trillion in investments to revamp existing infrastructure and reduce emissions. This investment will go into startups, infrastructure, industries and research. There is a multi-hundred billion dollar gap between what needs to be invested and what is being currently invested. This gap is another opportunity for India. We can emerge as a global financial innovation centre. A few ideas being discussed are "Blended capital" vehicles that can bring together investors of different return expectations, "green bonds" that can help finances flow into green investments and a new way of social investing.

Grassroots entrepreneurship can also get a big boost when we support green initiatives through it. One part that can also be touched upon is historical innovation. Innovation where

we look back at our traditional practices and then reinvent them from a current perspective will be historical innovation.

Whether it is tech innovation, bio innovation, grassroots innovation or financial system innovation, India has the potential and the opportunity to lead the globe through environmentally effective

and useful investments.



Catch them young

Engaging youth in environmental protection not only creates direct impact on changing their attitudes, but also influences their families

By Partha Pratim Mazumder

While we all enjoy the bounty of Mother Earth, how much do we do to safeguard her interests? From global warming to pollution, there are plenty of man-made problems that we dump, literally, on earth. If we do not change ourselves, the earth would vanish for ever. India's Vedic civilization has always revered the Earth as Vasundhara, enjoining us to love and take care of her. According to Atharvaveda's Bhumi Sukta, "The land is our mother and we are her children." So, can we afford to harm our mother?

Since youth constitutes a large part of the world's population and they obviously have to live longer, they are better placed to be its stakeholders and understand the consequences of adverse environmental scenario. So, it's our future generations who would end up being affected by these decisions and therefore they need to address various environmental hazards such as the resource depletion, biodiversity loss, and long-lived radioactive wastes, etc. Youth can be torch-bearers of change with their lifestyle. They can make their homes, schools and organizations more environment-friendly by adopting environment-friendly practices, recycling of different materials as well as preservation of resources like water, electricity, etc. That's why, engaging youth in environmental protection would have far more bearing on the environment. It would not only create direct impact on changing youth behaviours and attitudes but possibly also influence their parents, relatives and families.

However, taking an active interest in our planet cannot be an one-day affair. It has to be a continuous and ongoing process. Keeping this in mind, it is every responsible citizen's responsibility to conduct awareness campaigns and programmes for their children, so that they are sensitised from an early age and take an active interest in keeping the earth a better place. Parents and relatives, pre-schools, schools and day-cares must teach and celebrate with the kids how to create a harmonic bond with Mother Nature by singing songs, participating in art and crafts and sharing knowledge about how our daily-life practices affect the environment around us. Kids are conscious about the earth and environment-friendly in letter and spirit. It is important to apprise our children that the planet's resources are not infinite. If not preserved, it will lead to the extinction of the resources which would eventually lead to a polluted, grim and unhealthy future for them.

The best method of teaching the younger generation is to

lead them by example and through our own actions. The kids need to be sensitised in schools by planting saplings and watering them, cleaning the litter in the classrooms, screening environmental videos, and learning the dos and don'ts regarding environment. After all, youth are the backbone of the nation. They can change the future of the society with their well-being and courageous behaviour.

The environment is simply defined as our surrounding, including both living and non-living things. Environmental protection is a broad subject. Environment-related problems are increasing day by day and everyone is concerned about global warming and climate change but local and national environmental problems are less attended to and spoken about. Protecting the environment starts with pollution control. Therefore, youth can help reduce waste by paying attention to minor details in their daily lives, such as not carrying plastic bags while shopping. Actually, there are many other tips for greener environment. By applying the green knowledge at home and schools, we can help to make our city, a greener and healthier place to live in. Discarding computers, electronic appliances and rechargeable batteries recklessly can seriously harm the environment. The role of youth is to practise recycling for used computers and electronic/electrical appliances and wastes. There are several collection



points for recycling of rechargeable batteries, so there is no point throwing them away in the open. Youth have a definite and proactive role to play in protecting environment and its conservation that will improve livelihoods.

It is very important for everyone to understand that it is all related to each other. You cannot abandon the forest while talking about water, or you cannot leave water conservation unattended while working on the problem of soil. This is one aspect of the solution. The second aspect is that society makes a collective effort towards preserving and conserving environment. Personal effort is important, but more important is to involve society. A collective effort can really make a difference to the cause of environment and thus we can achieve our goal. We need to understand once for all that Nature has enough for our need but certainly not for greed.

Let us involve our kids and youths to restore our Vasundhara, which is considered to be the best karma!

Kadha

An essential prescription

People, especially during the COVID-19, are increasingly turning to Ayurvedic medicine

By Apoorva Anikethana Nanda

Kadha is an Ayurvedic medicine with ingredients such as ginger, turmeric, amla, tulsi, lemon, black pepper and aloe vera and cinnamon and is almost an essential prescription during the COVID-19. This kadha is ritually and traditionally an essential ingredient of the Indian culture and is being cooked since long now. Kadha is a lifelong immunity booster which is found to be an ayurvedic cure during these pandemic times. By consuming kadha regularly, people have been found to be curing basic flu symptoms like cold, cough, fever, throat pain and others.

The kadha, usually prepared by the common people, basically include following plants and herbs:

Giloy or Guddichi: Giloy meaning 'amrita' which implies the root of immortality is an ancient herb packed with complete benefits to boost the immunity among the person to fight virus or other major infections. Giloy is a natural medicinal herb and it has been proved that its medicinal properties can fight coronavirus or other similar infections. Giloy juice or Giloy tea have anti-inflammatory properties which cures respiratory problems like cold, cough, breathing problems which are major signs of symptoms of the novel coronavirus.

Ashwagandha: Ashwagandha is an ancient medicinal herb with all kinds of proven health benefits. Ashwagandha helps reduce stress besides keeping blood sugar and cholesterol levels in control. Our IIT-Delhi scientists have found out from research that Ashwagandha contains certain bioactive that interact with SARS-COV2. Ashwagandha herb contains some natural compound which can block the replication process of the novel coronavirus and hence cure the condition.

Chirayta: A very common Ayurvedic herb is used by practitioners for its varied anti-inflammatory properties. Besides, it's strong anti-asthmatic with expectorant properties. Its vitality helps get rid of any congestion and pollutant from the respiratory tract, reducing discomfort and congestion.

Tulsi: Tulsi has its own benefits which are used in Indian kitchens since long. Also, kadha necessarily includes Tulsi to cure basic flue.

Mulethi: Lastly, the addition of mulethi in this drink ensures that any problem associated with a sore throat or a dry cough is taken care of. It has strong properties which can soothe an irritated throat and strengthen your immunity.

An ideal 'Harit Ghar' now includes these herbs into it. Also, people are gradually shifting towards Ayurveda for its exceptional benefits.



Plantation

Save for oxygen

Let's pledge to emulate Shalini and become saviour for Nature

By Subhi Vishwakarma

Have you ever thought of having a savings account for planting trees?

Well, you should have, as it's too fascinating. Meet Shalini Chakrawati who is a student by profession and an environment enthusiast by passion. Though she lives in Mandla, Madhya Pradesh, she is surely contributing to the entire planet by her deeds.

Shalini has a good habit of keeping the left-over amount to herself whenever she gets money to buy something from the market by her parents; we all do this in one way or the other. The difference is we save it for our chocolates and other stuffs now but Shalini saves it for her plants. She has plenty of piggy banks in which she puts money. The money gifted to her on some special and auspicious occasions/festivals also goes directly to her plantation fund.

With the money thus saved she buys as many plant saplings as possible.

She has planted around 700 plants in the yard of their workplace till now where the bricks baking kiln generates smoke. We all would have read in our primary schools that trees must be planted, especially in industrial areas, but never was it actually implemented. Alas, the planet had people like Shalini!

Besides few varieties of mango, guava and other regional fruits, she has also planted hundreds of oxygen generating plants including Ashoka, Banyan and Coconut etc at her home.

She has been doing this plantation drive for past seven years now. She not only plants trees herself but also motivates others to do so. She has

specially created her 'Green Bharat' Instagram page in order to motivate the netizens to plant trees.

With plantation, comes the patenrs-like responsibility to take care of the saplings. What's more, Shalini is now making manure on her own to feed and bring up her tiny saplings. She has a unique way of utilizing the waste water as well.

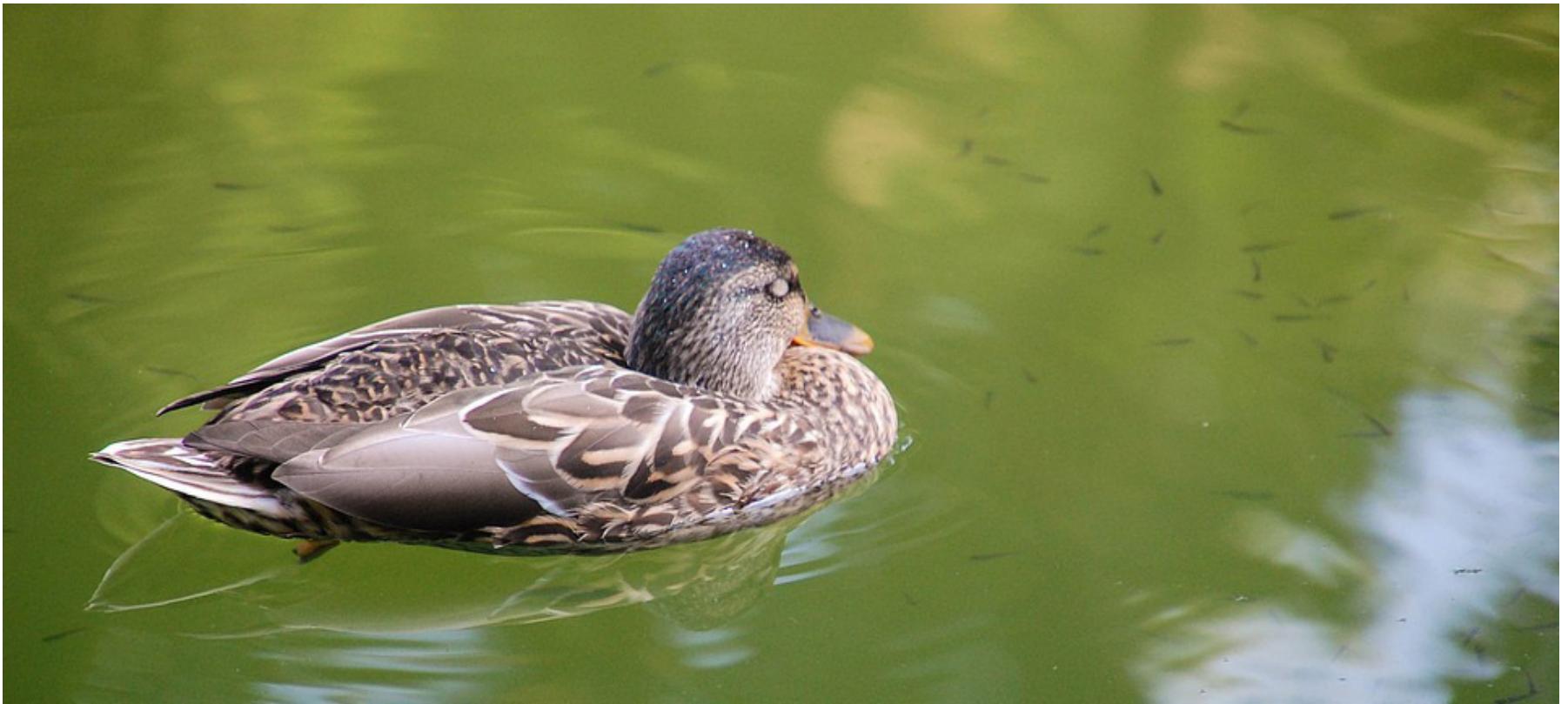
As Shalini says, "I borrow cow-dung from nearby villages. Seeing my work and dedication, villagers give me cow-dung for free. Then I soak them overnight in water with jaggery and then drain off the water next day. This drained water works as pesticide for the plants and the remaining mixture is kept for a month. After subsequent tossing on alternate days, the mixture gets ready as manure for use". She uses her home-made manure for the plants.

She is doing everything to motivate people around her to save money for plants and plant trees around.

This World Environment Day, she has planned to host a takeaway sapling drive for the netizens. As this will motivate them for planting more and more trees and she hopes to rope in more people for her unique initiative by the use of hashtag.

Let's pledge to become Shalini the saviour for Nature, save small money. Shalini thinks even one rupee per week would be enough and a benign beginning for our oxygen account. Lest we would be forced to run from pillar to post in future for oxygen.





Kalor

Truly novel

Jodhpur's Balesar villagers undertook a unique task and created a pond for animals and birds

By Kumari Swati

We all now know how it feels to remain without food or water. Continued lockdowns have made it more pertinent. We can well imagine the pain through which birds and animals undergo while being without food and water.

Summer further aggravates these problems of animals and birds while people have the choice to stay indoors.

It was then when some of us came with the idea of keeping food and water outdoors for birds and animals in pots and bowls.

But did we ever thought of digging a pond to cater to such needs of these animals and birds? Well, people of Balesar, a small village in Rajasthan's Jodhpur district, are doing so.

People of Balesar have done something unique and come out with more lasting and permanent solution. A small pond called Kalor has been created in this village and water therein was decided to be filled by Balesar water suppliers association freely for animals and birds. The Balesar villagers saw birds and animals dying of thirst, they came up with this novel idea to rescue them.

As the scorching heat of summers begins to affect, Shri Ram Seva Sansthan of Balesar and truck owners of the areas joined hands and decided to fill the dried pond voluntarily.

Within 100-meter radius of the Kalor pond, there are only ponds which get filled with rainwaters and lasts for few months, and there is perennial scarcity of water for several months, especially during summers.

Birds keep flying from one place to another to quench their thirst though many people put earthen pots on their roof tops for these birds, but these are rarely sufficient. The stray animals in vicinity suffer and at times die of thirst.

The water suppliers association poured as many as 20 tankers water to revive pond with an intent of saving these animals and hold birds back from deserting the area. Now the association has planned to plant trees surrounding the pond to make the area livelier and more soothing.

By arranging water and reviving the dried pond, the association has done a great job, especially for the birds and animals.

Groasis Waterbox

A technological marvel!

It creates a water column in the plant which enables plantation to survive and sustain even in dry and sandy zones

By Himanshu Goyal

People talk about environment conservation more than conserving it in areas where natural resources are sparse and find solutions to it rather than just talking. On the other hand, people living in dry areas, which have successfully generated an idea which will help taking away their woes if not forever then at least for a limited period. These plantations drives are being held in various regions per day to maintain ecological balance of the environment.

But in some regions, it seems difficult to take care of plants due to insufficiency of water or lack of time. The newly developed technology, known as Groasis Waterbox Technology (invariably called GW or Gro-box or water-box), enables tackle these problems coming in the ways of growing plants. This technology ensures sufficient water supply for a longer period and irrigates plants 24/7 without any manual intervention which makes this technology perfect for the dry and sandy areas.



Avinash Saxena from Jalore, Rajasthan is also growing plants with the help of these Groasis Waterbox technology. According to Avinash, people are increasingly becoming aware of the need for conservation of forest and water. It's not just about plating trees and leaving them uncared for. Plants too need

to be taken care of like any human being; they need water, they need sunlight, they need humans to protect them from weather, from animals and what not.

Avinash and his team runs various plantation programmes in many regions. According to one research, 80% of plants die due to the shortage of water, which spurred Avinash to research and evolve water-box technology.



Avinash says, "I planted 8 plants with the help of Gro-box in his city on an experimental basis; and for one month, he did not irrigate these plants and all of them not only survived but are also growing at a regular pace." This convinced him about the success of his experiment and now he employs this technique in his each of his plantation drives in the dry and sandy areas. The water-box also goes well for the saplings transplanted.

How does the Groasis Waterbox work?

The GW is a 20-litre box that is placed around a young seedling while transplanting. The box builds up a water column under the plant by collecting dew and rainwater, and distributes it over a long period of time to avoid evaporation. In practice, the transplanted seedling will receive just enough water from the GW to survive while it searches for water deep in the soil to develop a strong taproot. The taproot developed in this way will make the whole plant resilient to prolonged drought periods. The GW requires less inputs and management when compared to other water-saving devices.

Such practice makes it easier for commoners to embrace and adopt this tech-savvy device, which as per Avinash is setting footprints for younger ones chant 'Nothing is Impossible'.

If dry regions get such plantation techniques, the day is not far when people will see plantation growing over rocks.

Wasteland

Will is all that matters

Courtesy three Samaritans, a garbage barren land has been converted into an attractive botanical garden

By Subhi Vishwakarma

Ratanada Police line of Jodhpur, Rajasthan which once used to be known for having a huge waste dumping site is now attracting people for its creative and innovative botanical garden. No one residing in the area would have ever wondered that such a wonderful garden would come up over a piece of barren land so quickly.

Two Samaritans Nemichand and Veerendra Singh Mangaliya started to vacate the land by removing the filth and waste. Several local people joined them in the process. After the entire area was completely cleared of garbage, they began to plant some fruit saplings such as mango and guava, besides some medicinal plants. The local people used to carry water from their homes to water those saplings on a regular basis.

Little did they know that one day their naïve initiative of planting saplings will convert into a huge botanical garden. Sanjay Bhandari, a charted accountant by profession and an environmentalist by passion,

got motivated after witnessing hard works put in by these retired officials and senior local people and went whole hog after developing and rearing the botanical garden. He later suggested them to get drip irrigation facility installed at the garden, with a commitment to arrange tap water connection. The duo (Nemichand and Veerendra) got shot in the arm and their savior in Bhandari and thereafter the three never looked back and worked collectively to change this barren garbage land into a green gallery.

The place is now house to as many as 207 species of plants which collectively totals to a huge 4000 plantation in the garden. The plants include mango, pomegranate, guava, chiku (mud apple), banana, star fruit, blackberry, apple, papaya, etc.



The garden also includes many medicinal plants like Ashvagandha, Giloy, Adusa, Sehjan, Patharchata, Shatavari, Hathjod, Vajradanti, Arjuna and many others. These plants do not only add to the beauty of the area but also enrich the environment for residents in vicinity with exceptional medicinal benefits.

Besides greenery and medicinal plants, this park also attracts residents around it to dump all kinds of wastes only to develop an extraordinary craft work inside. With the help of locals, sitting arrangements have been made for the visitors out of wooden logs, with old bottles fencing and guarding the flower lanes, unused tyres for hanging flower pots, torn jeans turned flower vase, concrete waste utilised for making the fountain base, the plastic and stone chipped off is now beautifying the passage by carving and engraving various floral and artistic patterns. Above all, the park also includes a yoga area of 15'x15', with a pedestrian passage and jogging tracks.

When birds and tiny animals carry fruits and flowers, their seeds get strewn and scattered over only to germinate here and there. The management team doesn't waste saplings such grown and distribute



them to various government schools or to the locals residents who want to plant them in their personal gardens. Till now the park has distributed 2000 plant saplings free of cost.

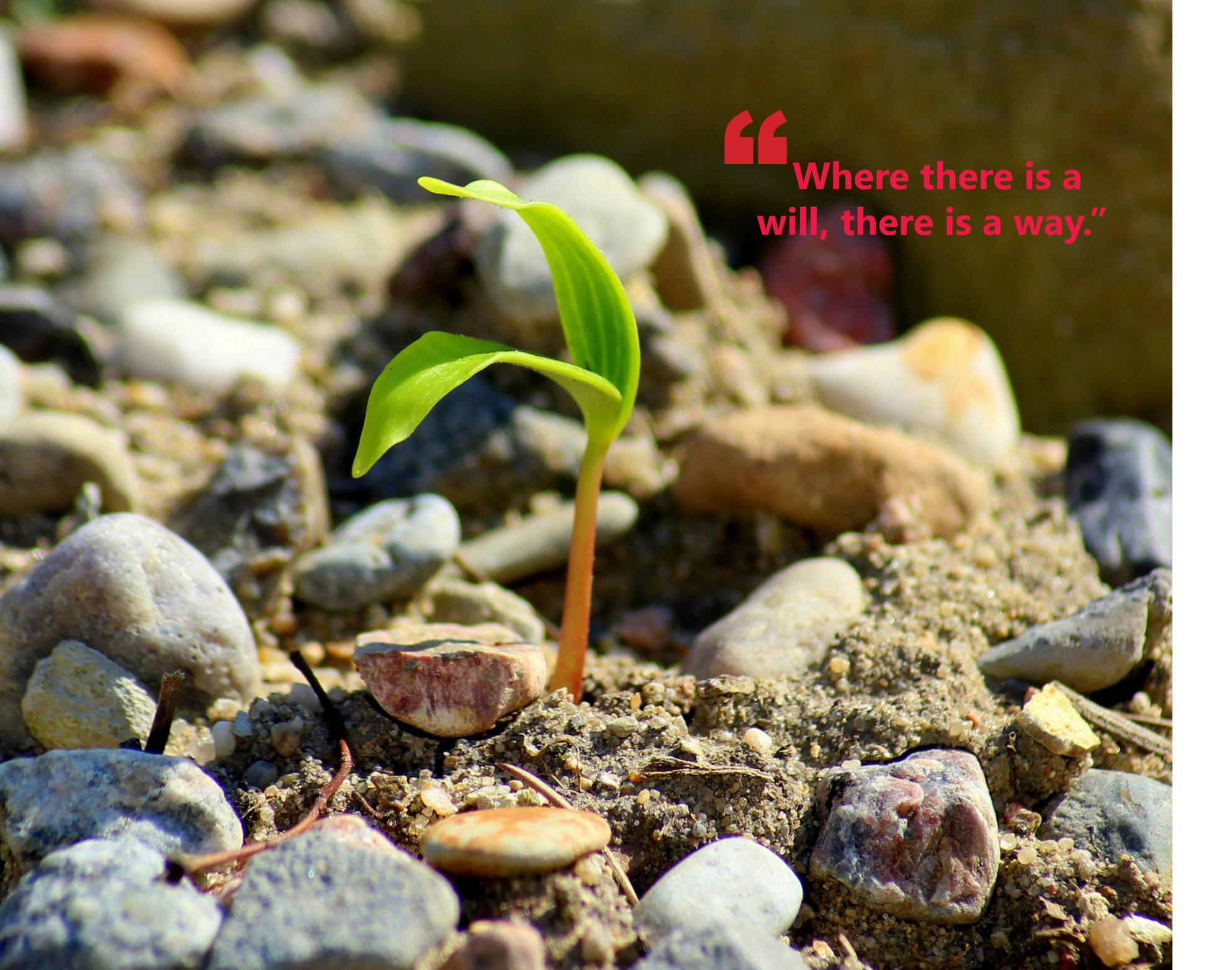
Now that the park is house to various creatures, the management looks after their needs, with 20 water bowls kept around and 10 bowls get filled with grains every day and 50 hand-made nests being installed.

To motivate people around to do similar creative things, the trio also now conducts several environment-centric competitions like paintings and workshops.

Notably, the green waste generated from the garden is not dumped like wastes but used for compost. No synthetic or chemicals are used over plants in this garden. The garden is totally organic.

In 2019, another local resident Kishore gifted water cooler and installed toilet facility in the garden. Now visitors frequent this flower valley, which once had stinking and foul smell.

Society needs more such Samaritans who can set an example for residents around to emulate and add to the environmental upgradation. Yes, where there is a will, there is way.



“Where there is a will, there is a way.”



Ponds' Rejuvenation

Standing for a cause

Ramveer Tanvar has been an icon for change with his sheer dedication and passion

By Paryavaran Team

Ramveer Tanvar is a one-man army, largely focussed on ponds' rejuvenation for quite some time. He has already resuscitated as many as 20 ponds and is still counting. The idea of the pond rejuvenation can be traced to Ranveer's childhood days. During his childhood days, he was entrusted with the responsibility of rearing herds of animals. In his leisurely time during his childhood, he used to sit beside a nearby pond enjoying its scenic beauty in Dadha village of Greater Noida.

He got so fascinated with his childhood hobbies and dreams that he began to spend most of his time in and around Noida and Ghaziabad where he spent all his school days. Now he finds nothing but a huge heap of waste, tall concrete buildings, construction debris, and dumping sites all around.

Concerned at the growing sprawling concrete jungles around, he changed his mind from mere attending to his routine job post engineering and moved to make efforts to do something to save his Mother Nature. Since 2014, he has been committed to protecting Mother Nature at whatever cost.

His concern for ponds' revival has gone too far now but the one pertaining to Dabra pond catches everyone's attention. Initially, the revival of Dabra pond looked next to impossible but his perseverance, dedication, vision and consistent attempts made him accomplish his dream.

Realising that it's not a one man task and to sustain his vision, he began spreading awareness about nature conservation and ecological balance in and around his village. He saw people leaving the tap water running or leaking, so he undertook the awareness campaign about the importance of the water in one's life. He organised *jal chaupal* where all the youngsters of the village were made to take round of the nearby places in smaller units. In the process, massive and careless encroachment of the pond came to the fore which drew people's attention. Besides, garbage wastes'reckless dumping was found to be creating havoc for nature.

In 2015, he began Dabra Pond's rejuvenation work where hundreds of youngsters joined him. They manually removed all the waste dumped at the site. And soon the scenario changed. For his extraordinary effort towards rejuvenating ponds, he came to be known as the 'Pond Man'. After having revived several ponds like Dabra, he turned to forest building. As people have got used to creating dumping sites, he undertook to waste segregation and to clear them up. He has now joined hands with various corporate houses and took up activities from clearing various waste dumping sites to creating beautiful and refreshing Forests in NCR under CSR (Corporate Social Responsibility). And a glimpse into those tiny saplings having grown up to shoulder's heights will make one tap his back once again.

Yogic Farming

A philosophical vision into practical farming

Ministry of Agriculture and Farmers Welfare aims to increase the country's farm production, by promoting the idea of 'yogic' farming

By R.Y. Hiranmai and Parul Vats

The idea that our thoughts and feelings can affect the matter is not a new concept. The acceptance and recognition of thought power and healing techniques with scientific evidences is increasing now a days but it is evident from our ancient texts and agricultural practices based on reverence and gratefulness for living and non-living components suggests that not only our ancestors understood the integrated and inherent relation the two living systems had – the living system of human intentions, thoughts & feelings and the living system of the natural world but also successfully translated it into economy and abundance in ancient India, the golden bird.

Over the time, however, the awareness of this connection has become critically fragile and with added explosion of population and excessive use of artificial chemicals and fertilizers Indian government is well aware of the present day degraded state of production, the state of farmers (both physical and psychological) and farming systems hence, traditional agri-practices, including organic farming, are being promoted.



Ministry of Agriculture and Farmers Welfare aims to double farmers' income by 2022, and the then Agriculture Minister Radha Mohan Singh stated that the government will promote the idea of 'yogic' farming to increase the country's farm production. This will be promoted via Paramparagat Krishi Vikas Yojana (PKVY), under which organic farming is also immensely encouraged. Asked if it was a scientific method, Singh said, "We are supporting organic farming and, along with it, the idea of Rajyoga. Such exercise is accepted by Ministry essentially to enhance Indian farmers' confidence. Indian farmers have, over the years, lost confidence in the age-tested knowledge of farming." Adding that this would "help India become Vishwa Guru" and "contribute in making India sone ki chidiya once again" the then Mohan Singh cited studies by a spiritual organization and told The Indian Express, "The idea is to help farmers. With the help of Rajyoga, we should enhance fertility of the soil. It will help

activity of micro-organisms in the soil too." The then Union Minister of Agriculture and Farmers Welfare informed that in Yogic farming, farmers first of all process seeds based on yoga proceedings...as a result the seeds are recharged by dint of spiritual energy resulting in the enhancement of the potency of seeds by directed focused rays of the meditative vibrations generated in connection with supreme energy. Thereafter the five elements are made conducive through yoga proceedings before the seeds are sown.

Rajyoga is based on a body of knowledge. Through understanding, the practitioner is able to create a state of spiritual awareness, and gently guides and directs the mind in a chosen direction, thinking only peaceful, positive and empowering thoughts and goes into the experience of them in the canopy of divine and is able to create a powerful atmosphere of vibrations.

Rajyoga has been tested on the parameters of science and shown significantly positive results. Professor Sunita Pandey of Agronomy Department at the Govind Ballabh Pant University of Agriculture and Technology said that research on wheat and groundnut under yogic farming practices had indicated positive results in enhanced germination rates, seedling growth and vigour.

The Brahma Kumaris Environment Initiative said one thousand farmers throughout India were combining organic farming with meditation, which is showing remarkable results. Yogic Agriculture is a bio-agriculture plus approach, which over and above, makes extensive use of positive mind power on seeds, soil, water, microbes, plants, fauna and flora. Scientific studies by agricultural universities (eg. G.B. Pant University of Agriculture and Technology, Uttarakhand; Resource Management Unit, Directorate of Wheat Research, Karnal; S. D. University of Agriculture and Technology, Dantiwada, Gujarat India) have shown improved rate of seed germination, microbial population, plant vigour, nutritional value of crops, shelf life, as a result of the application of yogic vibrations. The basic idea is that farmers can "change the nature through attitude (vritti)".



The vital steps as suggested in handbook published by Brahma Kumaris:

1) Giving saakash (directed attention and focused meditative vibrations) to the crop in the morning from 4 to 4.45am at Amritvela and by practising karma yoga (staying in elevated and positive state of mind) throughout the day while farming.

2) Give saakash to the seeds before sowing, experience supreme's powers entering to the seed and covering the seed with the power of purity, then sow it in sweet remembrance of Supreme energy, God, into the land. Before casting any type of organic manure into the land, stay in remembrance of God, exercise invoking divine's attention and cast along His powerful vibrations into the land.

3) If you want to sprinkle any resistance, medicine or tonic, experiment bringing it first into the notice of Supreme father God

and then spray it, staying in remembrance of Divine in the incorporeal world via intellect whilst working in field.

4) Take water in a vessel and keep your finger in it. Practice "I am knowledgeable soul. The rays of the sun of knowledge (God) are coming to me and reaching into the water through the medium of finger". Get concentration in this single thought for minimum ten minutes. Then sprinkle that water on the crop – it brings more benefit.

5) When the human being (being = soul) sits in sweet remembrance of the ocean of purity God, and assimilates that energy, the pure vibrations impedes growth of all the impure insects (virus, fungus, etc) which are born in the land or vegetation due to pollution. These pure vibrations create a special type of energy in vegetation to face any virus or disease which attacks on it.

6) Keeping your hand on the fertiliser, think that through the hands of me, the being(soul), the vibrations of purity and supreme's powers are melting in the fertiliser. While spilling on the crop, feel that supreme's powers are also falling on the crop and all insects are running out. Crop is also becoming healthy and powerful.

7) Take 15-10kg cow dung of a pure local breed, 10-5l of cow urine, 2kg black jaggery or 4l of sugarcane juice, 2kg powder of any pulse, 1kg jiv soil (soil from the borders of the farm or from dam-site) and 200l of water. Keep all the above-mentioned materials in a barrel for two-seven days under shadow. Everyday churn the mixture with a wooden stick twice. Then use it on the land. In one acre land, sprinkle its small amount by mixing it with water or if the land is wet, pour it using a bucket and sprinkle on the land with a neem branch. The above-mentioned method is called "jivamrit". Do this experiment with an interval of ten-fifteen days or every time while watering the field.



Yogic farming is the amalgamation of Constructive science and Spirituality which can make impossible possible and is a promising way towards the restoration, increased production, and sustained attainment of abundance, in economic, ecological, emotional, spiritual and physical spheres of a healthy nation.

(The author is Faculty at School of Environment and Sustainable Development, Central University of Gujarat)



Wetlands

A must for bio-diversity

Unless we change our consumerist approach, we can not grow

By Gouri Joshi

Wetlands are considered to be one of the most productive ecosystems supporting vital biodiversity on the Earth. They provide numerous ecological and anthropological services and therefore are called "kidneys" of the landscape. Wetlands though occupy only 2% of the world area, they store 10-14% of the carbon. Locally, wetlands contribute significantly in generating livelihood activities, tackling water pollution besides harbouring biodiversity, providing food-fodder and helping in flood and drought management.

It is speculated that 30 to 90 % of the world's wetlands have already been lost or have substantially modified. Prominent threats responsible for wetland loss are land-use changes done in the influential zone of wetlands for intensive agriculture, urbanisation, industrialisation, and irrigation.

The Ramsar Convention 1971 was adopted to protect and conserve the remaining wetlands of the world. The Convention defines 'wetlands' as the areas of marsh, fen, peat-land or water whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters. India signed the Ramsar Convention in 1982 and accordingly has identified 42 wetlands so far of international importance, 15 of which have been notified in 2019-20. India took 28 years to frame independent rules for the conservation and management of wetlands. Except for the large man-made lakes, ponds recorded on topographical sheets and village maps, other wetlands remained unprotected.

In 1985-86, the Government of India initiated a National Wetland Conservation Programme (NWCP) with funding assistance.

Under this scheme, 115 wetlands were identified as priority sites for conservation. National Lake Conservation Programme (NLCP) was also initiated to restore and conserve the urban and semi-urban lakes and water sources of the country. Under the National Wetland Inventory and Assessment (NWIA) program, an updated database of the wetlands of India was created. The Ministry of Environment, Forest and Climate Change (MoEFCC) identified 2,01,503 wetlands, that needed protection from growing urbanisation and pollution. Under NWCP and NLCP schemes, substantial work was done by a few state governments in India. Mostly this work remained restricted to the conservation of lakes and ponds rather than different types of wetlands. In February 2013, the MoEFCC merged the two schemes viz. NLCP and NWCP into a new integrated scheme named 'National Plan for Conservation of Aquatic Eco-systems (NPCA).

The Wetland (Conservation and Management) Rules (Wetland Rules) were adopted in the year 2010 at the national level. These Rules largely remained unutilised as identification and notification of the wetlands was the pre-requisite for the implementation and for various reasons, this was not done by any of the previous governments. In September 2017, the MoEFCC enacted a new set of rules known to be the Wetlands (Conservation and Management Rules), 2017 (Wetland Rules). In the year 2020, the MoEFCC issued guidelines facilitating the state governments to implement the Rules.

State governments are expected to identify and prepare a list of important wetlands, notify them under the Rules, delineate wetlands, wetland complexes and prepare a list of permitted and prohibited activities in addition to the Rules. Besides, they are also expected to develop integrated wetland management plans for the protection of wetlands and the conservation

of dependent biodiversity. These guidelines clarified that all wetlands, irrespective of their location, size, ownership, biodiversity, or ecosystem services values, can be notified under the Wetlands Rules 2017, except river channels, paddy fields, human-made water bodies specifically constructed for drinking water, aquaculture, salt production, recreation, irrigation purposes, wetlands falling within areas covered under the Indian Forest Act, 1927, Forest (Conservation) Act, 1980, Wildlife (Protection) Act, 1972 and the Coastal Regulation Zone Notification, 2011.

All local self-governments, civil society organisations and CSR contributors need to understand that these smaller water bodies, low-lying areas, marshy lands and mangroves are our protectors and therefore we need to protect and preserve them. Wetlands have to be identified, recognised, notified and adopted for conservation and local livelihood support. Beautification of lakes, ponds and wetlands should be done with an ecosystem approach wherein the functionality of these water bodies is enhanced.

Preservation of wetlands, streams, lakes, ponds, rivers, and vegetation cover is essential to minimise the adverse impacts of the water crisis that is speculated in India's Composite Water Management Index, 2018 report. Various social organisations have been working in the sector of water management, but they need more hands to expand their work. At the same time, those who can't actively participate in water-body protection can contribute by reducing pollution and excessive water consumption. Collectively we can change our consumerist approach that considers water as a commodity rather than a natural resource that is necessary for our existence.





Wasteland

Restore to rejuvenate

If each one of us takes step to re-green the planet, we can surely turn a wasteland into a green and breathing space

By Aishwarya Raj

“Make the mighty ocean, and the pleasant land” – Julia Carney These famous lines sum up today’s need for the environment, everyone has to take a step at their level to re-green the planet. Here is sharing a small success story one could execute in reviving a wasteland into a green, breathing space and can be replicated by communities too in their local spaces ! It has been 4 years since I joined IFS, and Parvati Division is my second posting after Kullu. Having taken charge in January this year, the first task was to assess the ground situation in different areas of my jurisdiction. On one such visit, we came across a tract of forest land dumped with garbage and inflicted with heavy weed overgrowth. The staff informed that the space was being misused by anti-social elements both during day and night time. Wanting to do something about the array of challenges, I wondered how we could reclaim the forest land into something safe and get some funds into picture for the execution.

Interestingly, the Government of Himachal Pradesh around the same time declared its intention to set up ‘Swarnim Vatikas’ across the state as part of Himachal’s 50 years statehood celebration. With a Rs 2 lakh limited budget, we decided to transform this 1 hectare of wasteland into an ecofriendly sprawling, green urban space for town dwellers and nature seekers alike. Named the green zone as ‘Sangam Swarnim Vatika’ for it stands at the confluence of the mighty Beas & Parvati rivers and

has turned into a beautifully landscaped garden forest, with a variety of tree species, creepers, shrubs, and a lot of avian birds as visitors! Getting into action The first step was to clear the area of its waste pile, cactus and weeds. My enthusiastic forest guard efficiently organized the clean-up. Almost 25 tippers of these were collected and disposed off. The organic waste was turned into processing vermicompost in our nearby nurseries. We checked the quality of soil by deep digging and it was found to be in fairly good condition for plant growth. After mixing with some fertile mountain soil and humus, the soil was readied.

Before planting, the second step was to ensure the protection of the 2.5 acre area from both grazing/biotic pressures and movement of anti-social elements for which the entire area was fenced. Plantation, Landscaping - The Up-cycling Tactic One would like to confess here that my I-pad (which I use at workplace to minimize paper use) was a huge help in designing the whole look of the Swarnim Vatika. After spending sometime exploring and reading on the local ecology and plant suitability of the ecotone area (Riverine), we identified species of trees, shrubs and ornamental ones that could be planted in the park.

In phase I, we have planted over 400 species of native varieties such as deodar, silver oak, horsechestnut, jacaranda, golden shower, bougainvillea, rose, thuja, cycas, ribbon plant, gladiola, peach, apricot, plum and pomegranate, among others. 200+ will be planted by the coming monsoon season. We have created grooves of some of these species that can be enjoyed by visitors in future.

For landscaping purpose, we decided to go the up-cycling way in three aspects. One, the discarded or used slates, a stone with which houses are made in the hills, from the neighboring settlement were up-cycled to create the walking trails. Two, only riverside stones were used to landscape and beautify the Vatika. In addition to being eco-friendly, they enhanced the natural riverside view. Three, signages regarding nature awareness and seating are being installed using the driftwood that we obtained during last monsoon.

Impact and future

Parvati Valley is a hugely popular tourist hotspot with ample of breathtaking destinations. The Vatika however was primarily created for the local people who actually don't have enough urban walking or recreational vistas. In order to ensure continuity and that the place is well taken care of even when we are transferred elsewhere, we shall be soon involving (post pandemic) the local panchayats, Mahila Mandals as well as youth groups to continue the greening and cleaning drives, and let them build a sense of ownership for the area. Next up, we are identifying more such degraded areas in Parvati jurisdiction that can be converted into green zones. With funds and local support in place, this initiative will help revamp more such areas and enrich the environment.

Key learnings

- Going minimal is key – Funds, resources, time
- No innovation but putting together all the principles of

sustainability

- Reviving degraded wastelands is more important than finding new spaces
- Recycle-Upcycle-Reuse – Not just catchy slogans but integral to today's global solutions
- Plantation – Focus on reviving/promoting local species alongside fruit/fodder ones
- Sustainability - Local community as custodians of their lands & forests
- Identify green warriors who can replicate such models

The Vatika is an example where the Forest department demonstrates the win-win scenario of nature conservation and development, and I hope that such efforts gain traction elsewhere too, for nothing is more satisfying than giving it back to Mother Earth! RWAs, schools, colleges, NGOs, corporates, institutions, all stakeholders need to get together and can take initiatives in and around their locality so that bit by bit, drop by drop, we all effect a change that can be truly called ecosystem restoration and revival of the planet!

(The author is an IFS officer currently posted as Deputy Conservator of Forests, Parvati Division, Himachal Pradesh)



Sarthak's Bhopal Model Towards sustainable environment

Population explosion naturally encroaches on the environment, putting immense pressure on the available natural resources, causing environmental degradation

By Imtiyaz Ali

A path breaking initiative in urban plastic waste management as well as economic upliftment of marginalized section of society Environmental degradation is a result of multilateral processes that encroach on the environment. A high rate of population growth increase pressure on the available resources and results in environmental stresses like loss of biodiversity, air and water pollution etc. Rural urban migration exerts a lot of pressure on the available resources such as housing, energy, education, health, transport water, and recreational ammenities in urban areas. It also leads to growth of slums and congestion. The amount of waste generated in cities by the production and consumption patterns of the masses leave a lot to be desired. A proper waste management is essential in order to reduce its detrimental impact on environment. The effect of consumerism has been observed to be one of the key problems towards environmental management around the world. All these problems require a concerted effort on part of policy makers, civic authorities and other functionaries to engage fruitfully with local communities in use and disposal of municipal solid waste especially plastics.

Poor disposal of polythene bags and other plastic products, in extensive use by population, is highly detrimental to the environment. Their disposal is of utmost concern in urban waste management practices and government and civic

bodies are equally concerned at its harmful affect on general well being of residents.

Many civil society organisations, NGOs and other agencies are working on different models of engagement with people to solve this problem. One such model has been the most talked about and successfully implemented by 'Sarthak' Samudayik Vikas Evam Jan Kalyan Sanstha", also known as Bhopal model which is being replicated in many states and ULBs across the country.

In 2008, 42-year-old, Bhopal-based Imtiyaz Ali quit his well-paying government job and started an NGO, Sarthak with the twin objective of mobilising waste pickers to tackle city's plastic waste disposal problems and in the process ensure better working conditions for the waste pickers.

Mr. Ali studied the effects of open burning of plastics for some months and then approached the Central Pollution Control Board (CPCB), "With the help from CPCB, we undertook an



experiment and burnt plastic at very high temperatures. We found that the end product when mixed with coal could be used as an alternative fuel in cement plants. After procuring permits from necessary state authorities we started to supply plastic to 12 cement plants," he said.

In the beginning Sarthak had to go through financial crunch. First they approached the Bhopal Municipal Corporation (BMC) for help. But when the civic body declined ,they turned to the United Nations Development Programme (UNDP) which agreed to help them.Sarthak identified 3,200 rag pickers from the city and hired them to collect plastic waste from households. These rag pickers are paid for the collection , sorting and segregation of waste but are also given other benefits like medical insurance, regular health check up, orientation and education and other handholding support. Children of the employed rag pickers are enrolled into government schools. An identity card is issued to the waste pickers by the ULBs , thus giving them a formal recognition. Today, more than ten years since it first started its operations, the NGO has grown to employ over 10000 rag pickers across



many ULBs and states where it operates. In 2012, Sarthak explored the option of using waste plastic in building roads and installed five plastic collection centres (PCC) in Bhopal which has now increased to 79 centres across the state. 16,000 kilometers of roads in the state have now been layered with plastic waste. The NGO also treats plastic waste in other cities of Madhya Pradesh like Indore, Jabalpur, Rewa, Vidisha, Khandwa, Dewas, Panna etc. Talking about the united effort to manage Bhopal's

waste, a Swachh Bharat Abhiyan Consultant with BMC says, "NGOs like Sarthak have helped reduce our burden of managing waste."



Sarthak has been instrumental in providing a steady compensation and a dignified life to all the rag pickers employed by it. These efforts helped cities like Bhopal and Indore cut down the overall plastic waste being dumped untreated or disposed of unscientifically, resulting in environmental hazards. Known as the 'Bhopal model' this waste management model designed by Mr. Ali is now being replicated by other cities like Pune and Kanpur. Sarthak's Operating Model

- Sarthak with the aid of its volunteers (rag pickers) collects plastic wastes from the municipal solid waste generated and collected in an ULB on daily basis. The plastic waste is then sorted into recyclable and non recyclable plastic waste.
- Non recyclable is segregated and co processed, compressed and baled for disposal in either of the following plants/activities:

a. Cement plants where its used in incineration which saves their energy outgo

b. Rural Road Development Corporation of M.P. where its mixed with mixture concrete as a layer in the road construction process.c. Part of co processed plastic non recyclable is sent to two plastic to oil plants in M.P. where in complete reverse engineering process plastic is converted to oil.

• Recyclable plastic waste is segregated product wise and used in recyclable co processing for onward usage by user industries, units for manufacturing recycled plastic products for reuse by households, industries, user units etc.

Like any other success story, the journey wasn't an easy one for Imtiyaz Ali. "There were times when the rag pickers would have a skeptical attitude in working with the organisation. But with support from all our stakeholders we were able to successfully implement it in Madhya Pradesh." he said.

As next step towards green planet, Sarthak now plans to explore the sectors of electronic waste (e waste management) and composting processes. There are also plans to share this model with NGOs across India, Imtiyaz Ali Sarthak Samudayik Vikas Evam Jan Kalyan Sanstha Bhopa.



(The author is an acclaimed environmentalist, currently working with Sarthak Samudayik Vikas & Jan Kalyan Sanstha, Bhopal)

पर्यावरण PERSPECTIVE



Contact Us At:
9449802157
sanrakshanparyavaran@gmail.com

Don't forget to visit

WWW.PARYAVARANPERSPECTIVE.COM