



Gokaraju Rangaraju Institute of Engineering and Technology (GRIET)

Centre for Continuous Excellence in Life Skills (CEL)

Centre for Sustainable Technologies for Eco-Social Resilience to Global Climate Change (CST-ERG)

Centre for Water Resources Engineering and Management (CREAM)

COMPREHENSIVE THEME PAPER ON UNITED NATIONS INTERNATIONAL MOTHER EARTH DAY -22 April 2022

We are happy to inform you all that GRIET is now accredited with the highest grade NAAC A ++

The vision of GRIET is to be among the best of the institutions for engineers and technologists with attitudes, skills and knowledge and to become an epicenter of creative solutions.

This is possible only by higher order learning in Knowledge, Skills and Attitudes (Attitudes-Affective domain – Feeling domain – Five higher levels of Krathwohl's domain ; Skills- Psychomotor domain – Doing domain-Five higher levels of Dave's Taxonomy; Knowledge – Cognitive domain – Thinking domain – Six higher levels of Bloom's Taxonomy) and effective implementation of twelve Programme Outcomes (NBA Graduate attributes)

Most of below mentioned material is presented from the websites of United Nations and Earth Day.org

- 1.Video link on “ Our Planet -Our Health : Theme of World Health Day 2022” by Prof.Suresh , NIMHANS, Bangalore
<https://youtu.be/aPNj30rvj74> - Our Planet , Our Health
- 2.Video link on “ Twenty ways to protect our planet and our health”
<https://youtu.be/CX6HPP -SpE>
- 3.Video link on “ Forests and Sustainable Production and Consumption”-International Day Forests 2022
<https://youtu.be/NJm2jV2CE5E>
- 4.Video link on Earth Day 2022
https://youtu.be/oYFc4O6Sg_Q
- 5.Video link on “ 500 Billion a year for Nature by Attenborough”
<https://youtu.be/ugF54sQ7pK8>
- 6..Video link on “ United Nations Director General Message on World Day for Cultural Diversity for Dialogue and Development”.
<https://youtu.be/lvUBmVfPYB0>
- 7..Video link on United Nations Director General Message on International Day of Biological Diversity 2021
<https://youtu.be/c05GOdB4m6k>

1. United Nations International Mother Earth Day - 22 April 2022

(Theme: Invest in our Planet - [www. Earthday.org](http://www.Earthday.org))

When Mother Earth sends us a message

Mother Earth is clearly urging a call to action. Nature is suffering. Australian fires, heat records and the worst locust invasion in Kenya. Now we face COVID -19, a worldwide health pandemic link to the health of our ecosystem.

Climate change, man-made changes to nature as well as crimes that disrupt biodiversity, such as deforestation, land-use change, intensified agriculture and livestock production or the growing illegal wildlife trade, can increase contact and the transmission of infectious diseases from animals to humans (zoonotic diseases) like COVID-19.

From one new infection disease that emerges in humans every 4 months, 75% of these emerging

diseases come from animals, according to UN Environment.

This shows the close relationships between human, animal and environmental health.

Visible, positive impact– whether through improved air quality or reduced greenhouse gas emissions – are but temporary, because they come on the back of tragic economic slowdown and human distress.

Let's remind more than ever in this International Mother Earth Day that we need a shift to a more sustainable economy that works for both people and the planet. Let's promote harmony with nature and the Earth.

The importance of biodiversity for humans

Coronavirus outbreak poses huge public health and global economy at risk, but biological diversity as well. However, biodiversity can be part of the solution since this diversity of species would make difficult to pathogens to spread rapidly.

This Mother Earth Day, coinciding with the Super Year of Biodiversity, is focused in its role as an indicator of the Earth's health.

There is growing concern about the health consequences of biodiversity loss and change. Biodiversity changes affect ecosystem functioning and significant disruptions of ecosystems can result in life sustaining ecosystem goods and services. Specific linkages between health and biodiversity include impact in nutrition, health research or traditional medicine, new infectious diseases and influencing shifts in the distribution of plants, pathogens, animals, and even human settlements, most of them affected by climate change.

Despite ongoing efforts, biodiversity is deteriorating worldwide at rates unprecedented in human history. It is estimated that around one million animal and plant species are now threatened with extinction.

With this big picture, and the coronavirus scenario, our immediate priority is to prevent the spread of COVID-19, but in long-term, it is important to tackle habitat and biodiversity loss.

We are in this fight together with our Mother Earth

Plastic pollution disrupts Human hormonal balance. It poisons and injures marine life by clogging our streams . The exponential growth of plastics is now threatening the survival of our planet. Let us together choose to reject , reduce , reuse and recycle plastics.

Success Story of Village Antwada – Revival of River Kali East ([www. Earthday.org](http://www.earthday.org)) (<https://www.earthday.org/news-and-stories/>)

If humans decide to revive the natural resources, nature supports; the forest region of village Antwada is a perfect example of this. The river Kali East (also known as Nagin river because of the serpentine route it follows) emanates from the ground aquifers of village Antwada and is one of the tributaries of river Ganga.

Originating from the forests of Antwada village in Jansad tehsil of Muzaffarnagar district, the river flows like a small stream for about 3 kms with clear waters. It had gone in oblivion during the past two decades since it was being used as a dumping ground with contaminants, untreated effluents and indiscriminate use of polythene from many sources disposed into it all along its course.

According to the elderly residents of Antwada village, there is an ancient mythological story about the origin of this river. Once upon a time, a saint lived across the village in a hut near a *Mahale* tree. An ardent follower of river Ganga, he would go to Ganga in Shukratal every morning to bathe. When he got old, it became difficult for him to travel the distance.

So one day after bathing at the river Ganga, he prayed that he could not come again as it was no longer possible for him to travel this distance every day. He urged that if Holy Ganga wished for him to bathe in Ganga every day, then it will have to come to his place at Antwada. Unable to bear the agony of not being able to follow his daily practice of bathing in the river, he could not sleep the whole night.

Next day, a bull is believed to have hit at the *Mahale* tree near the saint's hut. Because of the bull's actions, a group of snakes residing in the tree came out. One of the female snakes went towards the south direction. It is believed that a water stream followed her wherever she moved. Hence, the river is also known as "Naagin River". It is thus believed that the origin of this river is from that tree, and the saint bathed in this stream every day until his death.

From another perspective of science, the groundwater level of the area around Antwada village is much higher than other regions (even today at 10 feet) so that water flowed naturally from that point. The water flowed in a stream, and when other streams joined it, it became a river. The farmers over the years covered this stream and started farming on it.

Thereafter, it was turned into a dumping drain with all sorts of garbage flowing. The river which gave life to others was dying to get its own life back. Along its 300 kms long-flowing stream, it is being used as a drain and has become poisonous. It is also one of the main contributors of pollution in the Holy River Ganga when it merges with it at Kannauj.

The Kali river flows through eight districts of Uttar Pradesh before its confluence with Ganga river at a distance of 598 kms from Antwada. The river has over 1,200 villages situated on its bank, and the highly populated and predominantly rural catchment entirely depends on the Kali river as a water resource for domestic, agricultural and industrial use. At the originating point, the river is seen as a freshwater drain, but after flowing for about one kilometre, it takes the shape of a river, with water accumulating from different aquifers.

Key industries, including sugar processing units and their associated alcohol manufacturing distilleries, paper mills, dairies and tanneries discharge their effluents in this river. Besides, Kali river receives a large volume of untreated sewage from thousands of major and minor habitations around it, domestic waste water-flow and dead animals are also dumped in the river.

Due to this mismanagement of a vital water resource, its physio-chemical qualities have deteriorated so much that it has affected the groundwater too. The polluted river carries waterborne viruses and bacteria and is responsible for the ill health of the people. However, the marginalized community residing within the catchment area is bound to consume the highly polluted water. The residents are left with no option other than to fend for themselves or die of neglect.



Photo credit: Youth Ki Awaaz. The river which gave life to others was dying to get its own life back.

The major pollution problem diminishes at Aligarh as no industrial waste is added between Aligarh and Kannauj where it meets Holy Ganga at Mendiganj Ghaat at Gangaraj village. It was the awakened consciousness of the residents of Antwada village who felt that for this dark journey of river Kali (East) and considered themselves responsible for the state of river Kali. Hence, a people's campaign to 'Clean River Kali' was launched.

Determined for the cause of the society, under the leadership of Raman Tyagi of NEER Foundation, the villagers were informed about the impact of a polluted river through several awareness programs during the past five years. They made wall paintings *in the villages with messages to save the Kali River.*

A documentary was produced highlighting the causes and extent of pollution in the Kali River and its harmful impact on the environment and human health. All the public representatives in the regions along the Kali River catchment are being made aware of the present disgraceful situation of the river through letters. They are being requested to extend support to the organisation towards saving this river.

Representatives from various civil society organisations and students are being involved in the campaign on a mass level. International organisations working on river conservation such as FIAN International, FANSA, International River Foundation, World Environment Federation, India Water Partnership, WWF, Government of India, World River Forum, International Water Association and EARTHDAY.ORG are supporting the campaign. A coordinator has been appointed in each of the eight districts through which the Kali River flows, who are working to save the river.

The villagers of Antwada gathered and formed Nadi Raksha Samities (River Protection Committees). Based on these Samities (Committees), a Kali river Parliament has been formed. Health camps are organized in the villages to highlight their plight and support provided on medical facilities. The villagers were educated and sensitized not to drink the polluted water from the hand-pumps installed in the villages and not to irrigate their fields from the river water.

They were regularly convinced to clean the river. As a result of community-led efforts to revive the river which included sending grievance letters to Pollution Control Board and Human Rights Commission, there is some hope. The Planning Department of the Uttar Pradesh government has now prepared a scheme worth ₹88 crores to make the Kali river pollution-free.



Photo credit: Youth Ki Awaaz. It was the awakened consciousness of the residents of Antwada village who felt that for this dark journey of river Kali (East) and considered themselves responsible for the state of river Kali.

On November 21, 2019, the villagers of Antwada scaled up their efforts from sporadic cleaning of plastic waste and plantation activities, to digging at large scale and cleaning the river themselves with voluntary labour. The honest approach of the villagers who donated 148 bighas of their farming land to revive the river, influenced many organizations to join hands. The Minister of State, Government of India, Mr Sanjeev Baliyan, has now adopted this village for development. Regular action plans are made to clean the river kilometer-by-kilometer until the community achieves the target of cleaning it up to Kannauj.

With the support provided by Raman Tyagi of NEER Foundation, Meerut, the community became aware and joined hands to revive their traditional heritage: River Kali. This dedication and integrated community approach of the villagers by providing manual labour, sacrificing their agricultural land and volunteering to form River Protection Committees and Kali River Parliament, established a sustainable model for the revival of the river. This community-managed model is worth replication in other parts of the country and even overseas, and India can feel proud to see the dream of Swachh Bharat Mission come true with such social approaches and efforts.

Looking at the unique approach adopted in Antwada village, EARTHDAY.ORG conferred the “Star Village” certificate on February 2, 2020, to the village. The day marked the commemoration of [World Wetland Day](#), and it was an appropriate day to recognize the work of the lost wetland that has now been revived in Uttar Pradesh.

2. United Nations International Day of Forests -21

March 2022

(Theme : Sustainable Wood for People and the Planet)

<https://www.un.org/en/observances/forests-and-trees-day>

Too precious to lose

When we drink a glass of water, write in a notebook, take medicine for a fever or build a house, we do not always make the connection with forests. And yet, these and many other aspects of our lives are linked to forests in one way or another.

Forests, their sustainable management and use of resources, including in fragile ecosystems, are key to combating climate change, and to contributing to the prosperity and well-being of current and future generations. Forests also play a crucial role in poverty alleviation and in the achievement of the [Sustainable Development Goals](#) (SDGs).

Forests cover one third of the Earth's land mass, performing vital functions around the world. Around 1.6 billion people - including more than 2,000 indigenous cultures - depend on forests for their livelihoods, medicines, fuel, food and shelter.

Forests are the most biologically-diverse ecosystems on land, home to more than 80% of the terrestrial species of animals, plants and insects.

Yet despite all of these priceless ecological, economic, social and health benefits, global deforestation continues at an alarming rate.

Forests and Biodiversity

The United Nations General Assembly proclaimed 21 March the International Day of Forests in 2012.

The organizers are the United Nations Forum on Forests and the Food and Agriculture Organization of the United Nations (FAO), in collaboration with Governments, the Collaborative Partnership on Forests and other relevant organizations in the field.

- The Day celebrates and raises awareness of the importance of all types of forests. On each International Day of Forests, countries are encouraged to undertake local, national and international efforts to organize activities involving forests and trees, such as tree planting campaigns. The theme for each International Day of Forests is chosen by the Collaborative Partnership on Forests. The theme for 2020 is Forests and Biodiversity
 - Forests and woodlands are made up of over 60,000 tree species.
 - More than a billion people depend directly on forests for food, shelter, energy and income.
 - Deforestation continues at an alarming rate - 13 million hectares of forest are destroyed annually and this accounts for 12 to 20 percent of the global greenhouse gas emissions that contribute to climate change.
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3 United Nations International Day of Biological Diversity - 22 May 2022

(Theme : Biodiversity essential for sustainable development)

<https://www.un.org/en/observances/biological-diversity-day>

Biodiversity loss is a loss for humanity

Biological diversity is often understood in terms of the wide variety of plants, animals and microorganisms, but it also includes genetic differences within each species — for example, between varieties of crops and breeds of livestock — and the variety of ecosystems (lakes, forest, deserts, agricultural landscapes) that host multiple kind of interactions among their members (humans, plants, animals).

Biological diversity resources are the pillars upon which we build civilizations. Fish provide 20 per cent of animal protein to about 3 billion people. Over 80 per cent of the human diet is provided by plants. As many as 80 per cent of people living in rural areas in developing countries rely on traditional plant-based medicines for basic healthcare.

But loss of biodiversity threatens all, including our health. It has been proven that biodiversity loss could expand zoonoses - diseases transmitted from animals to humans- while, on the other hand, if we keep biodiversity intact, it offers excellent tools to fight against pandemics like those caused by coronaviruses.

While there is a growing recognition that biological diversity is a global asset of tremendous value to future generations, the number of species is being significantly reduced by certain human activities. Given the importance of public education and awareness about this issue, the UN decided to celebrate the International Day for Biological Diversity annually.

4. United Nations World Day for Cultural Diversity for dialogue and development –

21 May 2022

(Theme : Intra-cultural Diversity and Inter-Cultural Diversity essential for vibrant societies)

<http://www.unesco.org/new/cultural%20diversity%20day>

Bridging the gap between cultures is urgent and necessary for peace, stability and development. Cultural diversity is a driving force of development , not only with respect to economic growth , but also as a means of leading a more fulfilling intellectual, emotional , moral and spiritual life .

One of the goals of UNESCO (United Nations Educational , Scientific and Cultural Organization) is to integrate culture in sustainable development frame work.

Celebrating World Day for Cultural Diversity for Dialogue and Development

Held every year on 21 May, the World Day for Cultural Diversity for Dialogue and Development celebrates not only the richness of the world's cultures, but also the essential role of intercultural dialogue for achieving peace and sustainable development. The United Nations General Assembly first declared this World Day in 2002, following [UNESCO's adoption of the 2001 Universal Declaration on Cultural Diversity](#), recognizing the need to “enhance the potential of culture as a means of achieving prosperity, sustainable development and global peaceful coexistence.”

With the adoption in September 2015 of the 2030 Agenda for Sustainable Development by the United Nations, and the Resolution A/C.2/70/L.59 [on Culture and Sustainable Development adopted by the UN General Assembly in December 2015](#) , the message of the World Day for Cultural Diversity for Dialogue and Development is more important than ever. The 17 Sustainable Development Goals can best be achieved by drawing upon the creative potential of the world's diverse cultures, and engaging in continuous dialogue to ensure that all members of society benefit from sustainable development.

The World Day for Cultural Diversity for Dialogue and Development is an occasion to promote culture and highlight the significance of its diversity as an agent of inclusion

and positive change. It represents an opportunity to celebrate culture's manifold forms, from the tangible and intangible, to creative industries, to the diversity of cultural expressions, and to reflect on how these contribute to dialogue, mutual understanding, and the social, environmental and economic vectors of sustainable development. All are invited to join in, and promote the values of cultural diversity, dialogue and development across our globe

Cultural diversity provides fresh ideas and perspectives that enrich our lives in countless ways, allowing us all to grow and thrive together - Ms. Irina Bokova, Former Director General of UNESCO

5. United Nations World Health Day - 7 April 2022

(Theme: Our Planet , Our Health)

<https://www.who.int/campaigns/world-health-day/2022>

World Health Organization (WHO) defines Health as a state of complete physical , mental and social wellbeing , and not merely the absence of disease or infirmity. World Health Organization (WHO) defines public health as the art and science of preventing disease, prolonging life and promoting health through the organized efforts of society.

Expanding Consciousness is Health - Margaret Newman

Health is a continuous state of expanding consciousness with higher levels of evolving consciousness.

(Expansion is life and contraction is death – Swamy Vivekananda)

Health is a state of caring and connecting attitude to the symbiotic ecological wholeness , transpersonal and self-transcendent wholeness.

At least , half the world lacks access to essential health services.

Healthy Heart is possible by opening your heart to your feelings and inner peace , Opening your heart to others and Opening your heart to your higher self- Dr. Dean Ornish (adapted from his famous book on “ Reversing Heart Disease”)

On World Health Day, 7 April 2021, we will be inviting you to join a new campaign to build a fairer, healthier world.

Our world is an unequal one.

As COVID-19 has highlighted, some people are able to live healthier lives and have better access to health services than others - entirely due to the conditions in which they are born, grow, live, work and age.

All over the world, some groups struggle to make ends meet with little daily income, have poorer housing conditions and education, fewer employment opportunities, experience greater gender

inequality, and have little or no access to safe environments, clean water and air, food security and health services. This leads to unnecessary suffering, avoidable illness, and premature death. And it harms our societies and economies.

This is not only unfair: it is preventable. That's why we are calling on leaders to ensure that everyone has living and working conditions that are conducive to good health. At the same time we urge leaders to monitor health inequities, and to ensure that all people are able to access quality health services when and where they need them.

COVID-19 has hit all countries hard, but its impact has been harshest on those communities which were already vulnerable, who are more exposed to the disease, less likely to have access to quality health care services and more likely to experience adverse consequences as a result of measures implemented to contain the pandemic.