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ECO - BULLETIN

ECO-CLUB



B.P. CHALIHA COLLEGE, NAGARBERA

Volume II, Issue I

ECO-CLUB

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"There is no plan B, because there is no planet B"



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MESSAGE FROM PRINCIPAL

It gives me immense pleasure to know about the publication of Volume II, Issue I of Eco-Bulletin by the Eco-Club of B.P. Chaliha College, Nagarbera. I feel honoured and privileged to be part of an educational institution where every stakeholder is a learner and every day is an opportunity to learn and discover. We look at ourselves as a community of learners, where everyone learns including our teachers, students & staff. Hope, the theme **#BeatPlasticPollution** and its pressing importance is reflected in the Bulletin and the students get maximum from the Articles of the Eco-Bulletin.

Dr. Kamal Chandra Pathak
Principal and Secretary, B.P. Chaliha College

Flood and livelihood

Inku Devi,
Assistant Prof. Geography Dept.

Discarded plastic litters are a deadly trap for animals

Chiranjib Mili
Assistant Prof. Botany Department

There are several extremes events happening around the world which are affecting environment and livelihood of affected population in different ways. In 2020, EM-DAT, the international disaster database (www.emdat.be/), recorded 389 environmental disasters, which caused the loss of 15,080 human lives, affected 98.4 million people, and inflicted financial losses of over USD 171.3 billion. Flood is considered as a significant natural hazard resulting in large scale human suffering and great loss to assets on a regular basis all over the world (Bhattacharya and Bora,1997) . In fact, between 2000 and 2019 Flood happened to be the major source of recorded global disasters and over the same period it was recorded as the second largest natural disaster in terms of the total number of affected persons. (Tanoue et al,2021).

Livelihood and its understanding is widening with time. At present, it is not considered a way of life that includes income, employment and means of living but, it is the one that also furnishes a place and an identity in the society. The rate of livelihood devastation is expected to surge with the increasing frequency of natural events like flood. Floods have impacts on both individuals and communities, and have social, economic, and environmental consequences. . Flood not only deteriorates the social lives of people but also the economy as a whole. It causes considerable damage to standing crops, livestock, poultry, houses, transportation and communication systems, educational and institutional buildings, and other social facilities. It also deteriorates the normal functions of life affecting homesteads, agricultural land, daily activities, water supply, sanitation conditions, and economic structure.

The farcing action of flood and erosional activity of a river in its riverine environment causes loss of life and property of the people every year. There is need of some developmental strategies and different mitigation programmes as the human adjustment pattern adopted is not enouh to trigger the loss incurred. These different strategies and nitigation programme may be taken by the government with community participation approach. Livelihood of people are affected in many different ways. There is need of frequenet evaluation of the human adjustment pattern adopted by the people to reduce the loss of life and property

Reference

Tanoue, M., Taguchi, R., Alifu, H., & Hirabayashi, Y. (2021). Residual flood damage under intensive adaptation. *Nature Climate Change*, 11(10), 823-826.

The exponential growth of population and urbanization have led to a decline in natural habitats and thus to human-wildlife conflicts. Currently, one of the most prevalent types of environmental challenges at the moment is plastic bags, empty food-drink containers that provide a particular type of ecological trap. Numerous animals are drawn to the putrefactive fragrance, but they run the risk of being hurt or imprisoned while attempting to get at food scraps. Animals dying in this way can also be "bait" for others, e.g. necrophagous organisms. In addition, some rodents enter containers while conducting exploratory activities or use them as shelters. As a result, a large number of containers act as a deadly trap for animals. It is reported that about 1 million animals die every year after becoming stuck in or consuming plastic litter. According to another report, about 3.2 million voles, shrews, and mice die trapped in bottles and cans thrown from cars. More than 1,00000 dolphins, fish, whales, and turtles perish each year as a result of ingesting plastic or being entangled in it. This is just the verified count of impacted animals; many more deaths remain unrecorded.

However, to prevent such phenomenon i.e. trash pollution, policymakers, consumers, and businesses must work together to manage products responsibly and restrict consumerism. Indeed, many developed countries implemented 'container deposit legislation' to reduce discarded beverage containers, but still, many countries have not implemented any economic incentives to control

land-based litter. Additionally, large local volunteer cleanup efforts can help reduce litter in the surrounding area. Such initiatives must be carried out at the same locations regularly, managed by the local government or other institutions by providing gloves and bin bags, and punishment for litter disposal. Importantly, taking part in such activities has educational value by promoting environmental awareness and fostering excellent, environmentally friendly practices. Lastly, it can be hoped that photos and videos shared through online media move up citizen awareness of the consequences of plastic littering on wildlife.



Photo Source: <https://earth.org/plastic-pollution-animals/>

Role of Individuals in Environmental Conservation

Dr. Sibani Majumdar
Assistant Prof. Chemistry Department



Every individual's contribution to the environment is vital as it enables collective efforts to protect the environment, tackle global challenges, set positive examples, secure a sustainable future, and fulfil moral obligations. Each person's actions have a significant impact on social and ethical responsibilities, driving positive change for the well-being of both present and future generations.

Some of the possible ways by which an individual can contribute in the conservation of the Environment are mentioned below-

Reduce, Reuse, and Recycle: Embrace the 3Rs (Reduce, Reuse, Recycle) to save resources, reduce waste and reduce landfill pollution. By consciously reducing our consumption, reusing items wherever possible and finding ways to store cycle materials, we can make a big impact on the sustainable future.

Conserve Energy and Water: By making energy-efficient choices such as using LED light bulbs, turning off lights and appliances when not in use and using energy-saving settings on devices. On the other hand, using water wisely by fixing leaks, taking shorter showers, and using efficient appliances help in protect this precious resource.

Tree plantation: Planting trees and supporting local green spaces can help combat deforestation, provide habitat for wildlife, and improve air quality.

Sustainable Transportation: Choosing sustainable transportation methods like walking, cycling, carpooling, or utilizing public transportation whenever possible. These alternatives help decrease carbon emissions and reduce air pollution.

Renewable Energy: Consider using renewable energy sources like solar or wind power for our home or encourage their implementation in our community. Renewable energy reduces reliance on fossil fuels and support sustainable environment.

Mindful consumption: Mindful consumption includes making conscious choices, such as choosing eco-friendly products, supporting local sustainable businesses, and reducing the use of single-use items. By being clear about what we buy and how we dispose of our products, we can minimize waste and play an active role in building a more sustainable economy.

Awareness about Environment: By promoting awareness regarding environmental concerns and solutions, inspiring others to embrace eco-friendly behaviors and advocate for environmental protection policies we can encourage individuals to adopt sustainable practices and can collectively drive positive change for the planet's well-being.

BIOPLASTIC: A PIONEERING SUSTAINABLE SOLUTION FOR A GREENER FUTUREPRATISHA DAS,
ASSISTANT PROF., BOTANY DEPT.

As we celebrate World Environment Day this year, the topic of ecosystem restoration asks for immediate action to repair the earth. With worldwide worries about climate change, pollution and the overuse of non-biodegradable materials, finding sustainable alternatives is more important than ever. Bioplastics are one such alternative that is gaining traction. As an eco-friendly substitute for traditional plastics, bioplastics present a glimmer of hope for a more environmentally friendly future.

Unlike traditional plastics, which are made from fossil fuels, bioplastics are made from renewable biomass sources like corn starch, sugarcane, or vegetable oils. These substitute materials can mirror the functioning of conventional plastics while having a substantially smaller negative environmental impact. There are two primary categories of bioplastics: bio-based and biodegradable. Bio-based bioplastics can be generated fully or partially from biomass sources and are produced using sustainable feedstocks. These materials help to lessen carbon footprints by reducing dependency on fossil fuels. Contrarily, biodegradable bioplastics can decompose organically in the environment through biological or composting processes, preventing the lingering pollution linked to traditional plastics.

Bioplastics offer a range of environmental benefits that make them an attractive alternative to conventional plastics. First off, by using renewable resources rather than fossil fuels, they contribute to lowering greenhouse gas emissions. Bioplastics also help to reduce the amount of plastic trash generated. Conventional plastics pollute our oceans, landfills, and other natural areas because they take centuries to disintegrate. Biodegradable bioplastics, on the other hand, degrade very quickly, leaving no toxic residues and having less of an impact on ecosystems.

While bioplastics present a promising solution, they also face certain challenges. One of the main concerns is the lack of proper infrastructure for waste management and composting facilities. Biodegradable bioplastics require specific conditions for efficient decomposition, which may not be available in all regions. Thus, investment in infrastructure and public awareness campaigns are essential to ensure proper disposal and maximize the benefits of bioplastics. Additionally, the production of bioplastics requires careful consideration of resource allocation and land use. Large-scale cultivation of biomass crops for bioplastics production may compete with food crops or impact natural ecosystems. Striking a balance between sustainable sourcing and ensuring food security will be critical in the future development of bioplastics.

As we embrace the theme of 'Beat Plastic Pollution' on this year's World Environment Day, it also serves as a reminder that the decisions we make today shape the world we pass on to future generations. Embracing bioplastics as an alternative to conventional plastics is a significant step toward environmental restoration and sustainable living. By supporting research, innovation, and responsible consumption, we can pave the way for a cleaner and healthier planet for all. Let us seize the opportunity.



Photo Credit: <https://www.biogone.com.au>

Plastic Pollution: Conquering the Plastic Menace

Dr. Rubi Baishya
Librarian
B.P. Chaliha College



One of the most important environmental problems of our time is plastic pollution, which poses a serious risk to ecosystems, wildlife, and public health. Plastic garbage has accumulated in our oceans, rivers, and landfills as a result of the growing use of plastics and poor waste management techniques.

A multifaceted strategy that includes awareness, regulation, innovation, and personal accountability is needed to defeat the plastic scourge. Public awareness of the negative effects of plastic pollution is essential for altering consumer behaviour and advancing eco-friendly substitutes. To reduce the use of single-use plastics, promote recycling, and promote the creation of eco-friendly packaging materials, governments and organizations must pass strict restrictions.

To combat plastic pollution, innovation is essential. Biodegradable and compostable plastics, as well as alternative materials like plant-based polymers, have emerged as a result of technological advancements. Investing in research and development for sustainable packaging solutions is key to reducing our reliance on conventional plastics.

However, without individual action, the fight against plastic pollution cannot be won. Each individual must accept accountability for their use of plastic by implementing behaviours including minimizing plastic use, meticulous recycling, and assisting companies who place a high priority on sustainability.

Conquering the plastic menace requires a collective effort from governments, industries, and individuals. We can combat plastic pollution and protect the environment for future generations by increasing awareness, enacting sensible legislation, encouraging innovation, and accepting personal responsibility. To create a cleaner and more sustainable environment, it is a challenge we must take on head-on.

EMBRACING THE GREEN ECONOMY: PAVING THE WAY TO A SUSTAINABLE FUTURE

SOCHIN BORO CHOUDHURY,
ASSISTANT PROF. GEOGRAPHY DEPT.

As the world grapples with the urgent need to address climate change and environmental degradation, the concept of a green economy has emerged as a beacon of hope. A green economy represents a transformative approach that aims to reconcile economic growth with environmental sustainability and social well-being. A green economy is an economic system that promotes sustainability and seeks to reduce environmental risks and ecological scarcities. It encompasses a wide range of sectors, including renewable energy, sustainable agriculture, waste management, green infrastructure, and eco-friendly technologies. The principles of a green economy emphasize the efficient use of resources, the reduction of carbon emissions, the preservation of biodiversity, and the promotion of social equity.

Key Pillars of the Green Economy:

Sustainable Energy Transition: A green economy prioritizes the shift from fossil fuels to renewable energy sources such as solar, wind, and hydropower. This transition reduces greenhouse gas emissions, creates job opportunities and fosters technological innovation.

Circular Economy: In a green economy, the linear "take-make-dispose" model is replaced by a circular approach. This involves recycling, reusing, and reducing waste to minimize resource consumption and environmental impact.

Conservation and Biodiversity Protection: Preserving natural habitats, promoting sustainable land use, and protecting biodiversity are crucial components of a green economy. By valuing ecosystems and their services, we can ensure nature and society's long-term well-being.

Sustainable Agriculture and Food Systems: The green economy recognizes the importance of sustainable agriculture practices, such as organic farming, agroforestry, and the reduction of chemical inputs. Local and resilient food systems contribute to food security, rural development, and environmental sustainability.

Benefits of a Green Economy:

The green economy offers a promising path towards a sustainable future, aligning economic activities with environmental sustainability and social well-being. It provides benefits such as environmental preservation, economic growth and job creation, a resilient and inclusive society, and long-term economic stability. Transitioning to a green economy requires collective effort from governments, businesses, and individuals, through policies, sustainable practices, and conscious choices. By embracing the principles of a green economy, we can address the pressing challenges of climate change, resource depletion, and social inequality, and build a better future for generations to come.

The concept of a green economy offers a promising path towards a sustainable future. By aligning economic activities with environmental sustainability and social well-being, we can address the pressing challenges of climate change, resource depletion, and social inequality. Embracing the principles of a green economy allows us to foster innovation, create jobs, preserve ecosystems, and enhance the quality of life for present and future generations. Let us embrace the transformative power of the green economy and work collectively to build a more sustainable and resilient world.



Photo Credit: <https://www.biogone.com.au>

Plastic pollution

Manika Parbin

BA III Sem. Department of Geography

Plastic pollution, accumulation in the environment of synthetic plastic products to be the point that they create problem for wildlife and their habitats as well as for human pollutions . Plastic pollution directly affecting millions of people livelihoods food production. plastic pollution effects ocean and degrades resulting in less oxygen in the ocean .low level of oxygen death of ocean animals such an fish plastic in the most common in place of mountain areas. Plastic pollution can be solve by recycle micro plastics embedded in the deep in the articice and do not poured plastic in to the ocean.

Causes of plastic pollution:

- *We create large amounts of waste.
- *Commercial fishing nets.
- *Mismanaged plastic disposal.
- *Decomposition time .
- *Nature spread pollution.
- *Overuse of plastic.

How plastic waste is damaging the planet :

- *It disrupts the food chain.
- *It can be dangerous for human health.
- *Groundwater pollution can affect our water supply.
- *It's harmful to animals .
- *It causes land , air and water pollution .
- *Clearing areas of plastic waste is difficult and expensive.

WORLD ENVIRONMENT DAY 2023

Theme #BeatPlasticPollution

The World Environment Day 2023 is Celebrated at B.P. Chaliha College, Nagarbera, with a day long program on 5 June 2023, Monday. The programmes included Bi-Cycle Rally, Awareness rally, Community awareness programme, installation of bamboo dustbins at adopted village, plantation in college campus, adopted village, awareness meeting etc.

Eco-Club, Science Forum, Assam Science Society Nagarbera Branch, NCC, NSS Scout and Guide, and of B.P. Chaliha College Participated in the program

WORLD ENVIRONMENT DAY 2023

Theme #BeatPlasticPollution

PROGRAMME SCHEDULE

- 9.00 am: Plantation at College Campus
By Principal, B.P. Chaliha College
- 9.15 am : Bi-Cycle Rally to the Adopted Village via. Nagarbera Market (NCC and NSS and Students Union of B.P.Chaliha College) , Awareness Rally (Walk) Eco-Club, Science Forum, Scout and Guide and ASS Nagarbera Branch)
- 10.00 am: Plantation at Market (NSS)
- 10.30am : Plantation at Daspara Village
- 11.00am : Installation of Dust Bins
- 11.30am : Awareness Meeting at Daspara Village
- 12.00 : Back to College Campus
- 12.30 pm : Inauguration of Eco Bulletin.



ACTIVITIES OF ECO-CLUB



Azadi ka amrit Mahotsav, 15th July 2022



Azadi ka amrit Mahotsav, 15th July 2022



World Environment Day Celebration, 5 June 2022



World Environment Day Celebration, 5 June 2022



Plantation Drive with College Staff and Students



Plantation Drive with College Staff and Students



Work in Collaboration with NCC Unit of B. P. Chaliha College



Work in Collaboration with NCC Unit of B. P. Chaliha College

ACTIVITIES OF ECO-CLUB



Plantation Drive at college Campus with College authority and NCC



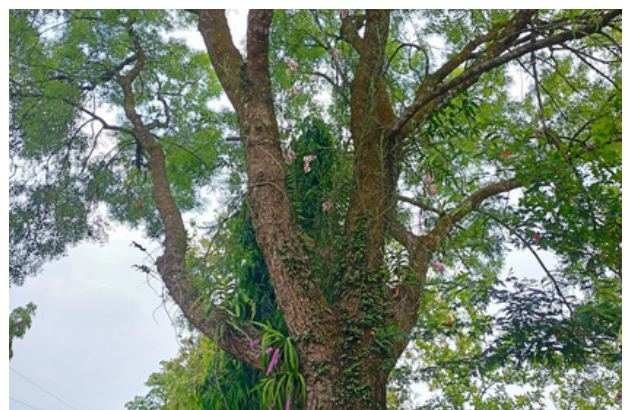
Meeting of Eco- Club Members



Students Union and College faculty members Collaborating with Eco-Club



Natural Surroundings of B. P. Chaliha College



ACTIVITIES OF ECO-CLUB



Celebration of National Science Day, 2023 in Collaboration with Science Forum of B.P. Chaliha College



Celebration of National Science Day, 2023 in Collaboration with Science Forum of B.P. Chaliha College



Celebration of National Science Day, 2023 in Collaboration with Science Forum of B.P. Chaliha College



Past Activities of Eco-Club of B. P. Chaliha College

Past Activities: Visit of Prof. Abani Kumar Bhagabati in Environmental awareness programme of Eco-Club of B. P. Chaliha College

