

“Environment and Forest”

About the Conference of STOP at Turkey

Small Touches for Our Planet- Final Conference was successfully held on 5th of June 2023, World Environment Day, at Tedsakaryakoleji in Sakarya. Each partner of STOP project presented the developed modules which are climate change and energy, climate and forest, climate and recycling, climate and water, and climate and gas; and we had a productive conference by discussing these issues with almost 100 hundred young people participation. Event ended the conference with little surprise (thermoses, notebooks, pens, t-shirts, climate guideline, and bracelets) to the young people in order to keep our small touches for our planet. At least, we will reduce our plastic usage with our thermoses and to continue our story with our small touches, we invite all young people to use thermoses.



STOP participants at Conference @ Turkey

“Small Touches for Our Planet”, (STOP), is the need to develop social awareness about climate change that threatens our future and to take responsibility for each individual. In this regard, Local environmental events, disaster news on the national, and world agenda have given us sufficient motivation. It is essential for our planet to start a total struggle from the individual to the whole. STOP will include 24-month (2 years) implementation. In this project, the coordinator is COORDINATOR: KARGENC CLUB – TURKEY, and the partners are; Hellas For Us – GREECE, AUDELE – URUGUAY, DISHA – INDIA, and AVES – TOGO. Warmer spring and summer temperatures, coupled with decreases in water availability, dry out woody materials in forests and increase the risk of wildfire. Fires can also contribute to climate change, since they can cause rapid, large releases of carbon dioxide to the atmosphere.





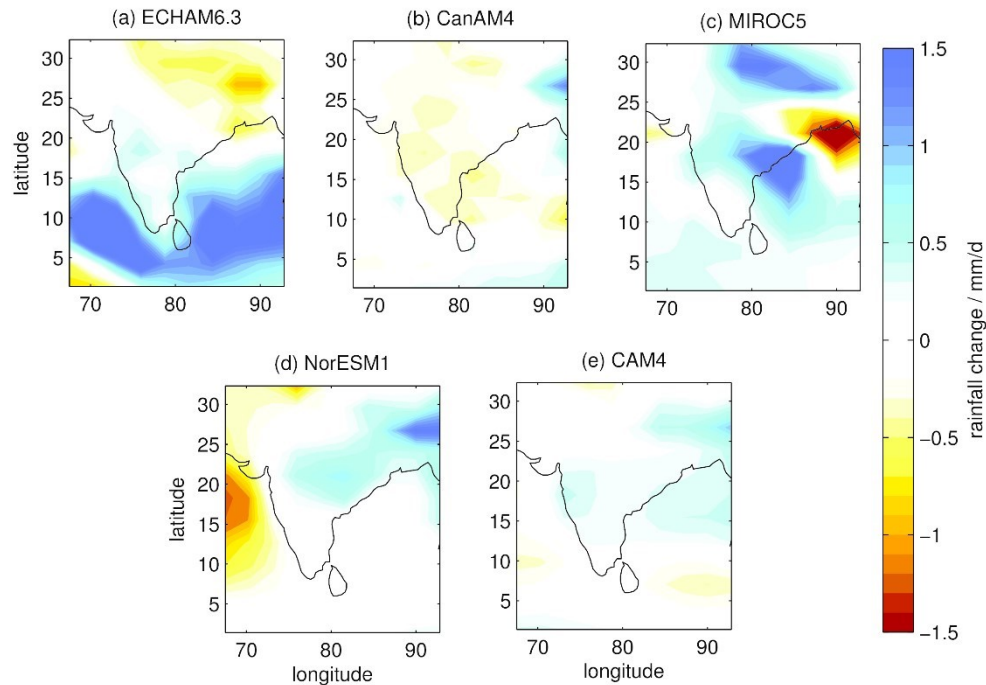
Mr. Kerron Presenting module in conference @ Turkey

CLIMATE CHANGE PATTERN OF INDIA

India, like many other countries, is experiencing the impacts of climate change. While it's important to note that climate change is a global phenomenon, there are specific patterns and effects that can be observed in the Indian context. Here are some key aspects of the climate change patterns in India:

- ✓ **Rising temperatures:** India has been witnessing increasing average temperatures over the past few decades. Heatwaves have become more frequent and intense, particularly in the northern and central regions. High temperatures have adverse effects on agriculture, public health, and water resources.
- ✓ **Changing rainfall patterns:** Climate change has influenced the monsoon season, which is critical for India's agriculture and water availability. While overall rainfall may not change significantly, there has been an observed shift in the distribution of rainfall. Some regions experience more intense rainfall events, leading to an increased risk of floods and landslides, while others face extended dry spells, leading to drought conditions.
- ✓ **Melting glaciers:** The Himalayan region, which spans several Indian states, is home to numerous glaciers. These glaciers are melting due to rising temperatures, posing risks such as glacial lake outbursts and altering water availability in the long run. The reduced flow of meltwater from the glaciers can affect rivers that are crucial for irrigation and hydropower generation.
- ✓ **Sea-level rise and coastal vulnerability:** India has a vast coastline along the Arabian Sea and the Bay of Bengal. Rising sea levels pose a significant threat to coastal communities, especially in low-lying areas. Increased coastal erosion, saltwater intrusion into freshwater sources, and heightened vulnerability to cyclones and storm surges are some of the observed impacts.

- ✓ **Impact on agriculture:** Agriculture is a key sector for India's economy and sustenance of its population. Climate change affects crop yields, water availability, and pest patterns, leading to reduced agricultural productivity. Erratic rainfall, heat stress, and changing monsoon patterns pose significant challenges to farmers across the country.
- ✓ **Biodiversity and ecosystems:** Climate change poses a threat to India's rich biodiversity and ecosystems. Shifts in temperature and rainfall patterns can disrupt habitats, alter migration patterns, and affect the breeding cycles of various species. Fragile ecosystems like coral reefs, mangroves, and forests are particularly vulnerable to climate change impacts.



Climate Pattern

Climate change impact on Indian Forests

Climate change has significant implications for Indian forests, affecting their composition, health, and overall ecosystem functioning. Here are some of the key impacts of climate change on Indian forests:

- **Changes in forest composition:** Rising temperatures and changing rainfall patterns can influence the distribution and composition of forest ecosystems. Some tree species may face difficulties in adapting to new climatic conditions, leading to shifts in species composition. Certain species may decline or migrate to higher elevations or latitudes, while invasive species may proliferate.
- **Increased vulnerability to wildfires:** Higher temperatures, prolonged droughts, and increased fuel load can enhance the risk of forest fires. Forests in regions like Uttarakhand, Himachal Pradesh, and Jammu and Kashmir have experienced severe wildfires in recent years. These fires not only lead to the loss of valuable forest cover but also pose risks to wildlife and human settlements.

- **Pests and diseases:** Climate change can affect the prevalence and distribution of pests and diseases in forests. Warmer temperatures and altered rainfall patterns can create favorable conditions for certain pests, such as bark beetles and defoliating insects. These pests can weaken or kill trees, leading to forest degradation and loss of biodiversity.
- **Altered phenology and reproductive patterns:** Climate change can disrupt the timing of key biological events in forests, such as flowering, fruiting, and seed dispersal. Changes in temperature and rainfall patterns can lead to mismatches between the life cycles of plants and their pollinators or seed dispersers. This can have cascading effects on the entire ecosystem, including impacts on wildlife that rely on forest resources for food and habitat.
- **Increased forest stress and mortality:** Rising temperatures, droughts, and heatwaves can cause physiological stress to trees, making them more susceptible to diseases, pests, and other disturbances. In regions experiencing water scarcity, reduced soil moisture can negatively impact tree growth and survival. These factors increase the vulnerability of forests to dieback, particularly in drier regions.
- **Impact on forest-dependent communities:** Forests are vital sources of livelihood for many communities in India, particularly tribal populations. Climate change impacts on forests, such as reduced availability of non-timber forest products, declining crop yields, and increased forest fire risks, can have adverse effects on the socio-economic well-being and cultural practices of these communities.

To address the impacts of climate change on forests, conservation efforts focus on promoting sustainable forest management, protecting biodiversity hotspots, and enhancing the resilience of forest ecosystems. Afforestation and reforestation programs, along with initiatives to reduce greenhouse gas emissions, are essential components of climate change mitigation strategies in the context of Indian forests.



Climate Change impact at Globe

Climate change is having significant impacts on forests worldwide. Here are some key impacts supported by data from scientific studies and reports:

1. **Increased forest mortality:** Rising temperatures and changing precipitation patterns have led to increased forest mortality rates globally. A study published in *Nature Climate Change* in 2020 estimated that since the 1970s, global tree mortality has doubled, with climate change being a significant contributing factor.
2. **Changes in forest productivity:** Climate change affects the productivity of forests, including changes in growth rates and carbon sequestration capacity. A study published in *Science* in 2020 found that global forest productivity has declined by 0.9% per year since the early 2000s, primarily driven by rising temperatures and droughts.
3. **Altered tree species distribution:** Climate change is causing shifts in the distribution of tree species worldwide. A global analysis published in the journal *Nature Climate Change* in 2019 projected that by the end of the century, suitable climates for many tree species will shift significantly, potentially leading to changes in forest composition and ecosystem dynamics.
4. **Increased risk of wildfires:** Warmer temperatures, prolonged droughts, and changes in precipitation patterns have increased the risk and severity of wildfires in many forested regions. According to data from the Global Forest Watch, global tree cover loss due to wildfires reached a record high of 13.1 million hectares in 2020.
5. **Forest carbon sink reduction:** Forests play a crucial role in sequestering carbon dioxide from the atmosphere. However, climate change impacts such as increased droughts, heatwaves, and pests are reducing the carbon sink capacity of forests. A study published in the journal *Nature* in 2020 estimated that global forests' net carbon uptake declined by 1.1% annually between 2001 and 2019.
6. **Loss of biodiversity:** Climate change poses a significant threat to forest biodiversity. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) reported in 2019 that climate change is among the key drivers of biodiversity loss, with impacts including species range shifts, altered ecosystem dynamics, and increased extinction risks. It's important to note that the impacts of climate change on forests vary across regions and forest types. Some regions may experience more pronounced impacts due to specific climatic conditions and existing vulnerabilities. Effective forest management, conservation efforts, and global climate change mitigation strategies are crucial to minimize the negative impacts of climate change on forests and promote their resilience.





Forest preservation initiatives in India

The Government of India has undertaken several initiatives to promote forest preservation and sustainable forest management. Here are some notable initiatives:

1. **National Afforestation Programme (NAP):** The NAP, launched in 2000, aims to increase forest and tree cover in the country. It includes schemes such as the National Afforestation and Eco-Development Board, Green India Mission, and National Mission for a Green India. These initiatives focus on afforestation, reforestation, and restoration of degraded forests.
2. **Joint Forest Management (JFM):** The JFM program involves local communities in the protection, regeneration, and sustainable management of forests. Under this initiative, forest-dependent communities are given rights and responsibilities to manage and benefit from the resources of nearby forests, fostering their participation in conservation efforts.
3. **Compensatory Afforestation Fund Management and Planning Authority (CAMPA):** CAMPA was established to ensure the judicious utilization of funds collected as compensation for diverting forestland for non-forest purposes. These funds are used for afforestation, wildlife protection, and other activities to mitigate the loss of forest cover.
4. **Forest Conservation Act (1980):** The Forest Conservation Act regulates the diversion of forestland for non-forest purposes such as mining, industry, and infrastructure projects. It requires the approval of the central government for such diversions and emphasizes compensatory afforestation.
5. **Project Tiger:** Launched in 1973, Project Tiger aims to conserve the endangered Bengal tiger and its habitat. It focuses on the protection and management of tiger reserves, anti-poaching efforts, habitat improvement, and community participation.

6. **Forest Certification:** The Indian government encourages forest certification programs such as the Forest Stewardship Council (FSC) and the Programme for Endorsement of Forest Certification (PEFC). These programs ensure sustainable forest management practices, responsible timber sourcing, and conservation of forest ecosystems.
7. **Wildlife Protection Act (1972):** The Wildlife Protection Act provides legal protection to wildlife and their habitats, including forests. It prohibits hunting, trading, and poaching of endangered species and promotes the establishment of protected areas and wildlife sanctuaries.
8. **Green Skill Development Programme (GSDP):** The GSDP aims to enhance the employability of youth and local communities in the forestry sector. It provides training and skill development in various areas, including afforestation, forest conservation, and wildlife management.

These initiatives, among others, demonstrate the Indian government's commitment to forest preservation, sustainable forest management, and biodiversity conservation. However, the effectiveness of these initiatives relies on their implementation, community engagement, and ongoing efforts to address the challenges posed by deforestation, encroachment, and climate change.

Global Initiatives of Forest Conservations

- ❖ **United Nations Forum on Forests (UNFF):** The UNFF is a global policy forum established to promote the sustainable management, conservation, and development of all types of forests. It provides a platform for international dialogue, policy coordination, and capacity-building on forest-related issues.
- ❖ **Reducing Emissions from Deforestation and Forest Degradation (REDD+):** REDD+ is a global mechanism under the United Nations Framework Convention on Climate Change (UNFCCC) that aims to reduce greenhouse gas emissions from deforestation and forest degradation. It incentivizes developing countries to protect their forests and enhance carbon stocks.
- ❖ **Forest Stewardship Council (FSC):** The FSC is an international certification system that promotes responsible forest management. It sets standards for sustainable forestry practices and offers certification for responsibly sourced wood and forest products.
- ❖ **Programme for Endorsement of Forest Certification (PEFC):** PEFC is another international forest certification system that promotes sustainable forest management. It provides assurance of responsible sourcing and supports the conservation of forests and their ecosystems.
- ❖ **Bonn Challenge:** The Bonn Challenge is a global effort to restore 350 million hectares of deforested and degraded land by 2030. It aims to enhance biodiversity, mitigate climate change, and improve the livelihoods of communities through forest landscape restoration.
- ❖ **Global Partnership on Forest and Landscape Restoration (GPFLR):** GPFLR is a global network of governments, organizations, and communities committed to restoring forests and landscapes.



It aims to accelerate restoration efforts, share knowledge, and mobilize resources to achieve restoration targets.

- ❖ Tropical Forest Alliance (TFA): TFA is a public-private partnership that brings together governments, companies, and civil society to reduce deforestation linked to the production of agricultural commodities such as palm oil, soy, beef, and pulp and paper.
- ❖ Convention on Biological Diversity (CBD): The CBD is an international treaty that addresses the conservation and sustainable use of biodiversity, including forests. It promotes the conservation of forest ecosystems, the equitable sharing of benefits, and the integration of biodiversity considerations into development plans.
- ❖ COP26, at the Glasgow climate summit, gave a call in a draft agreement for big carbon-cutting targets by the end of 2022. Countries are persuaded to execute the Paris Agreement of 2015 to limit global warming to below 2 °C, preferably to 1.5°C (degrees Celsius) compared to pre-industrial levels. However, policymakers of many countries still have to set the framework for its execution. As the COP 26 negotiations enter their final stage, it is critical to call for strict measures for enhanced adaptation finance to climate-proof our cities and tackle these climate extremes. Further, it is essential to invest in nature-based solutions like restoring and regenerating the wetlands, forest covers, and traditional resource management practices, which also act as natural shock absorbers.

These initiatives, along with international agreements such as the Paris Agreement and the Sustainable Development Goals, highlight the global commitment to forest preservation, restoration, and sustainable forest management. Collaboration and concerted efforts among governments, organizations, and communities are essential for achieving meaningful results in global forest conservation.

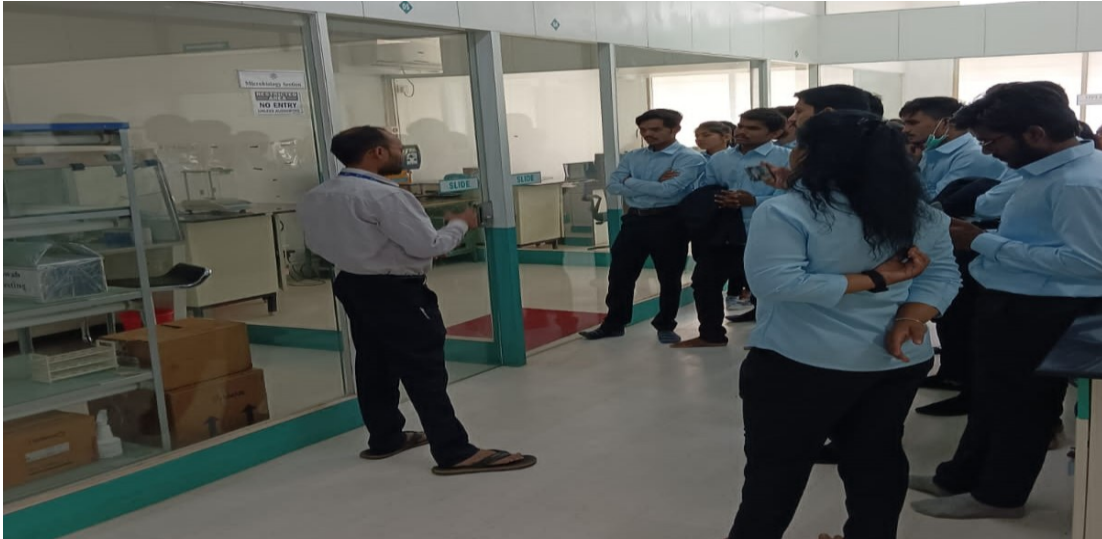




Global Forest Map

Best Practices and awareness programme by Dish International for Youth under STOP activity for forest conservation

- ✓ Protected Areas and National Parks: Establishing and effectively managing protected areas and national parks is crucial for safeguarding forest ecosystems. These designated areas provide legal protection and support biodiversity conservation, habitat preservation, and sustainable use of natural resources.
- ✓ Sustainable Forest Management (SFM): Implementing SFM practices ensures the responsible use and management of forest resources, considering ecological, social, and economic aspects. SFM involves activities such as selective logging, reforestation, habitat restoration, and monitoring to maintain ecosystem health and productivity.
- ✓ Community Engagement and Participation: Involving local communities and indigenous peoples in forest conservation efforts is vital. Recognizing and respecting their traditional knowledge, rights, and stewardship of forests fosters sustainable practices, effective resource management, and social coexistence.
- ✓ Forest Landscape Restoration: Restoring degraded forest landscapes through reforestation, afforestation, and ecosystem rehabilitation is crucial for enhancing forest health, biodiversity, and ecosystem services. It involves careful selection of tree species, soil conservation measures, and the involvement of local communities.



Climate change Awareness Programme under STOP activity

- ✓ **Combating Illegal Logging and Wildlife Trade:** Strengthening law enforcement, implementing traceability systems, and raising awareness about the negative impacts of illegal logging and wildlife trade are essential for forest conservation. Curbing these activities reduces deforestation, forest degradation, and wildlife habitat loss.
- ✓ **Conservation of Endangered Species:** Implementing targeted conservation programs for endangered plant and animal species helps preserve biodiversity within forests. These programs involve habitat protection, species monitoring, captive breeding, and community-based conservation initiatives.
- ✓ **Awareness and Education:** Raising awareness about the importance of forest conservation among the general public, stakeholders, and decision-makers is crucial. Education programs, campaigns, and outreach initiatives help promote a deeper understanding of the value of forests and the need for their protection.
- ✓ **Collaboration and Partnerships:** Effective forest conservation requires collaboration among governments, non-governmental organizations, local communities, and other stakeholders. Building partnerships and fostering cooperation at local, national, and international levels strengthen conservation efforts, resource sharing, and knowledge exchange.

Activity for youth engagement in STOP Project by Disha International India



“Tree Plantation Activity” organized under STOP activity by volunteers of Disha International @ India, Aurangabad



“Cleaning Drive” organized by volunteers of Disha International @ MIT, Aurangabad, India, Aurangabad



Youth Exchange Activities @ Aurangabad, India
CAPACITY BUILDING IN THE YOUTH PROJECT618798-EPP-1-2020-1-TR-EPPKA2-CBY-ACPALA