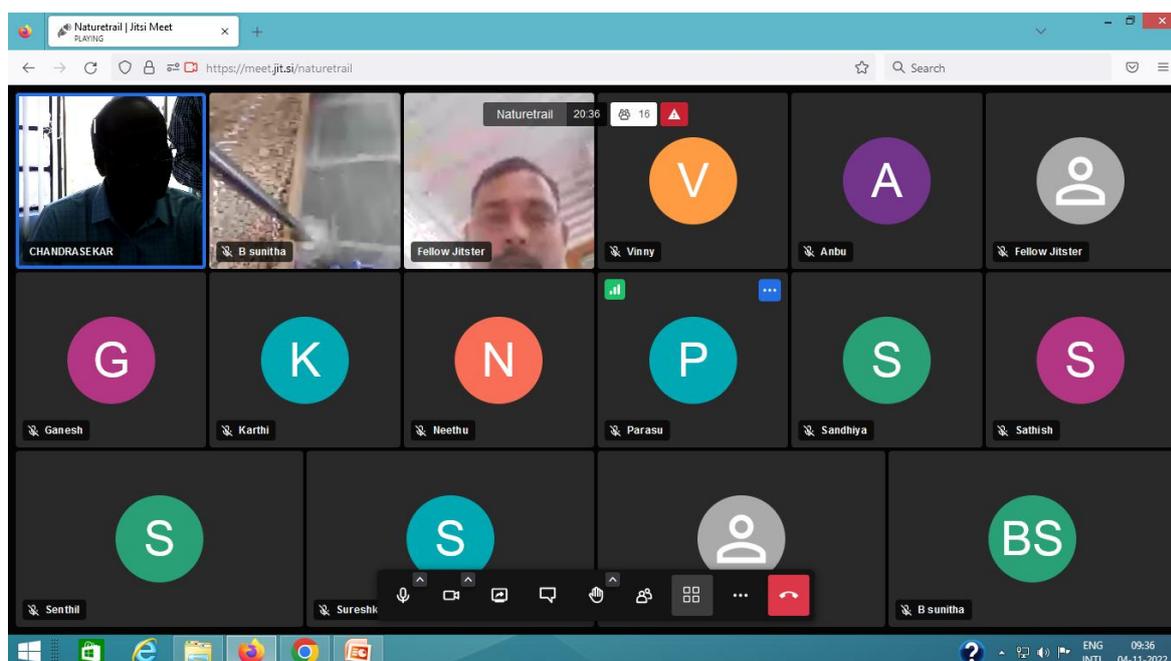


**STUDENTS AWARENESS PROGRAMME
ONLINE ACTIVITY UNDER PRAKRITI
(04.11.2022)**

STUDENTS AWARENESS PROGRAMME: ONLINE ACTIVITY UNDER PRAKRITI FOR THE MONTH OF NOVEMBER 2022 (04.11.2022)

The Institute of Forest Genetics & Tree Breeding, Coimbatore organized an online awareness programme in collaboration with the CUBE organization, Coimbatore under “PRAKRITI” for 18 students from Coimbatore Government Arts College, Sri Krishna Arts and Science College, Sri Ramakrishna College, Sri Sakthi Engineering College participated in the programme. The main aim of conducting this programme was to create environmental conservation awareness among school and college students related to environment conservation. The students were given a brief introduction by Smt. B. Sunitha, Chief Technical officer about the “PRAKRITI” program and IFGTB and its contribution towards environment and society. Then, she introduced the ‘Speaker of the Day’ Shri. P. Chandrasekaran, Assistant Chief Technical Officer, Extension division of IFGTB.

In his lecture on the topic ‘*Gass Forest Museum- A treasure for nature enthusiasts*’, he explained the importance of forest museums in nature education. He highlighted the uniqueness and salient features of Gass Forest museum exhibits. The interesting stories behind the various exhibits of the museum were shared with the students.



**STUDENTS AWARENESS PROGRAMME
ONLINE ACTIVITY UNDER PRAKRITI
(07.11.2022)**

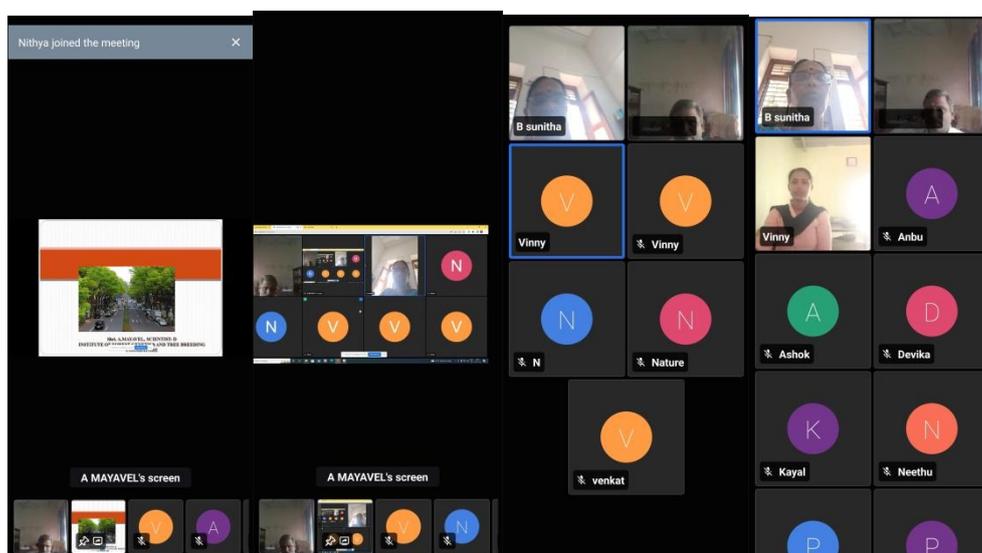
STUDENTS AWARENESS PROGRAMME: ONLINE ACTIVITY UNDER PRAKRITI

The Institute of Forest Genetics & Tree Breeding, Coimbatore organized an online awareness programme in collaboration with the CUBE, an NGO based at Coimbatore under “PRAKRITI”. During the programme, about 25 college students from Coimbatore Government Arts College, Sri Krishna Arts and Science College, Sri Ramakrishna College, Sri Sakthi Engineering College, etc. were participated. The main aim of conducting this programme is to create environmental conservation awareness among the college students.

A brief introduction was given by Smt. B. Sunitha, Chief Technical officer, about the “PRAKRITI” program and IFGTB activities and its contribution towards environment and society. They were also briefed about the biodiversity issues and environmental issues in conservation.

The students were imparted knowledge by conducting lecture by Shri. A. Mayavel, Scientist-D, IFGTB, Genetics & Tree Improvement division on 07.11.2022 on topic “Importance of Urban Greening”.

In his talk, he briefed about schemes for avenue planting which include planting of trees in various ways such as Random planting, formal planting, informal planting, etc.. He pointed that, New Delhi the capital city has grown to be one of the greenest city due to the consistent emphasis to grow more trees and strict monitoring on green felling. Also the speaker elaborated about the social and economic benefits. The social benefits such as aesthetic quality, shade, protection cover against noise and air pollution, home for birds, etc. Urban trees are having the ability to reduces stress and it will beautify the surroundings by green cover and different colours of flowers. The ecological benefits were also discussed with definition on urban forestry and structure.



**STUDENTS AWARENESS PROGRAMME
ONLINE ACTIVITY UNDER PRAKRITI
(09.11.2022)**

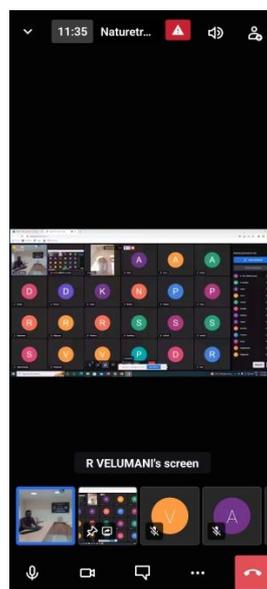
STUDENTS AWARENESS PROGRAMME: ONLINE ACTIVITY UNDER PRAKRITI

The Institute of Forest Genetics & Tree Breeding, Coimbatore organized an online awareness programme in collaboration with the CUBE, an NGO based at Coimbatore under “PRAKRITI”. During the programme, about 30 college students from Coimbatore Government Arts College, Sri Krishna Arts and Science College, Sri Ramakrishna College, Sri Sakthi Engineering College, etc. were participated. The main aim of conducting this programme is to create environmental conservation awareness among the college students.

A brief introduction was given by Smt. B. Sunitha, Chief Technical officer, about the “PRAKRITI” program and IFGTB activities and its contribution towards environment and society. They were also briefed about the biodiversity issues and environmental issues in conservation.

The students were imparted knowledge by conducting lecture by Shri. R. Velumani, Technical officer, IFGTB, PBT&C division on 09.11.2022 on topic “Agroforestry systems for sustainability”

The lecture was started with definition of the ‘Agroforestry’ which is the land use management system in which trees are grown around and along agricultural crops or pastureland. He highlighted that 33% of the forest cover need to be maintained in our country to maintain the ecological balance and agroforestry is the only viable option to achieve the target. He explained that, under agroforestry system the nutrient dynamics is faster and more efficient than monoculture plantations. Agroforestry system will enrich the soil by adding more organic material to the soil. Agroforestry helps in the nitrogen fixation and prevents the soil erosion. The wind break agroforestry system is developed for avoiding the economic loss of various agriculture and horticulture plantations due to heavy wind. Agroforestry provides fodder, fibre, fertilizers, fuel food, furniture, etc. Various site specific agroforestry systems were developed throughout India for increase in small timber, fodder, fruits, fibre, etc and enhancing the livelihood of farming communities .



**STUDENTS AWARENESS PROGRAMME
ONLINE ACTIVITY UNDER PRAKRITI
(14.11.2022)**

STUDENTS AWARENESS PROGRAMME: ONLINE ACTIVITY UNDER PRAKRITI

The Institute of Forest Genetics & Tree Breeding, Coimbatore organized an online awareness programme in collaboration with the CUBE, an NGO organization, Coimbatore. During the PRAKRITI programme, about 20 college students from Coimbatore Government Arts College, Sri Krishna Arts and Science College, Sri Ramakrishna College and Sri Sakthi Engineering College were participated. The main aim of conducting this programme was to create environmental conservation awareness among college students related to environment conservation.

The students were given a brief introduction by Smt. B. Sunitha, Chief Technical officer about the “PRAKRITI” programme, IFGTB activities and its initiatives towards environmental conservation. They were also briefed about the biodiversity issues and environmental issues.

Mohammed Ali Noushad , Scientist B, IFGTB, of Forest Ecology & Climate Change division given lecture on “Biodiversity in Changing climate” on 14.11.2022. During the programme the speaker briefed about biodiversity and climate change. He briefed about what is biodiversity, types, its role in ecosystem and environment services. He touches biodiversity hotspots in the world and in India, i.e. India hosts 4 biodiversity hotspots: the Himalayas, the Western Ghats, the Indo-Burma region and the Sunderland which Includes Nicobar group of Islands.

He elaborated that, how the climate change is altering the biodiversity and species loss in the ecosystem. Also, he cautioned about the ill effects of manmade pollutions helping in raising of earth’s temperature and creating lot of long-term negative effects in environment. He informed to the gathering about, the soaring human populations along with the rampant destruction of the earth’s biomes are putting the biodiversity at huge risk. Introduction of invasive species is the second most important reason for biodiversity loss in the modern world. Environmental pollution is another big factor contributing to biodiversity loss. Atmospheric and hydrologic pollution have far-reaching negative effects on biodiversity.

Climate change is projected to become a progressively more significant threat to biodiversity in the coming decades. Carbon dioxide released from burning fossil fuels and biomass, deforestation, and agricultural practices contributes to greenhouse gases, which prevent heat from escaping the earth’s surface. This rise in global temperature has devastating effects on the world’s biodiversity. This could lead to changes in phenology of plants and animals. One of the severely affected ecosystems is the marine ecosystem such as coral. The rise in sea temperature has led to increased incidence of coral bleaching and as a consequence increased mortality. Climate change has also accelerated the spread of invasive species as more and more area become suitable for their survival. The rapid change in climate change is pushing animals and plants to the brink of extinction as the rate of change is much faster than the organism’s ability to evolve. The Bramble Cay Melomys of

Australia is considered as the first animal extinction caused by human induced climate change.

Climate change is an extremely complex problem and hence there is no easy solution to it. The way forward is difficult and will require some extremely tough decisions which can only be implemented if there is proper education and awareness among people.

How does climate change affect Biodiversity??

Behavior and morphology

- ✓ Behavioral responses include seeking shade or refuge, altering feeding times, changing site use, and shifting circadian or circannual rhythms
- ✓ Ectotherms, where metabolic rate is sensitive to temperature increasing summer temperatures have been associated with **reduced body size**.
- ✓ **Ocean acidification**- by 2050, oceans may be too acidic for corals to calcify
- ✓ **Coral bleaching**.
- ✓ **Bird migration**

Graphs showing Proportion Male vs Temperature for three scenarios (a, b, c) illustrating shifts in temperature tolerance.

Healthy coral in the Great Barrier Reef

Dead coral after a bleaching event in the Great Barrier Reef

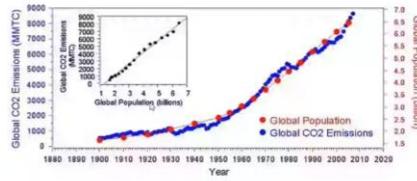
Muhammad Ali Noushad's screen

Participants in the Jitsi Meet grid:

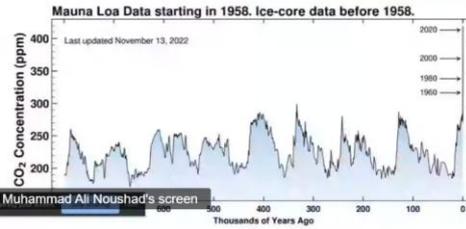
- Row 1: Senthil, Muhammad Ali N..., Muhammad Ali..., B sunitha, Vinny, Ambika, Arun, Dinesh
- Row 2: Jegan, Neethu, Padma, Parasu, Pavithra, Priya, sathish, Senthil
- Row 3: Senthil, Senthil, Senthil, Senthil, Senthil, Senthil, Senthil, Vasanth

Climate change

- ✓ By 2030 global temperatures could increase by more than 1.5°C (2.7°F) compared to before the industrial revolution
- ✓ Paris agreement- limit below 1.5 degrees
- ✓ The intensity and frequency of fires, storms or periods of drought
- ✓ Earth's temperature has risen by 0.08° Celsius per decade since 1880, but the rate of warming since 1981 is more than twice that: 0.18° C per decade



*Latest CO₂ reading: 416.22 ppm



Participant list:

- Priya
- Muhamad ...
- Muham...
- sunitha
- Vinny

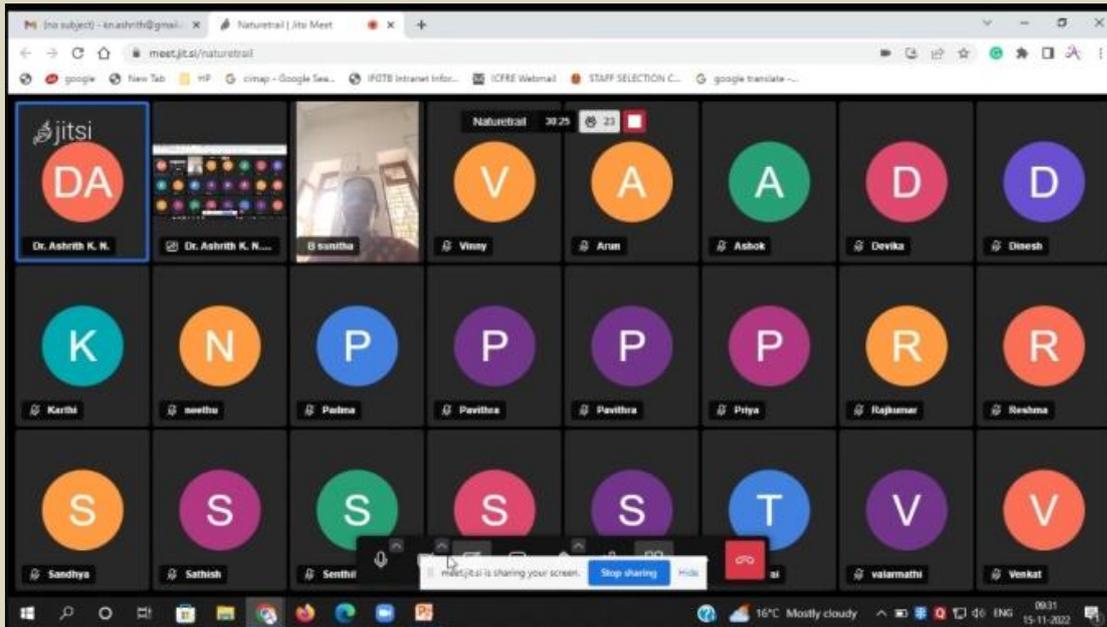
**STUDENTS AWARENESS PROGRAMME
ONLINE ACTIVITY UNDER PRAKRITI
(15.11.2022)**

STUDENTS AWARENESS PROGRAMME: ONLINE ACTIVITY UNDER PRAKRITI

The Institute of Forest Genetics & Tree Breeding, Coimbatore organized an online awareness programme in collaboration with the CUBE, an NGO organization, Coimbatore. In total of 23 college students from Coimbatore Government Arts College, Sri Krishna Arts and Science College, Sri Ramakrishna College and Sri Sakthi Engineering College were participated in the programme. The main aim of conducting this programme was to create environmental conservation awareness among college students.

The students were given a brief introduction by Smt. B. Sunitha, Chief Technical officer, about the “PRAKRITI” program and IFGTB and its contribution towards environment and society. They were also briefed about the biodiversity issues and environmental issues.

During the programme, Dr. K. N. Ashrith, scientist-B, IFGTB delivered a lecture on ‘Economic importance of beneficial insects’ on 15.11.2022. He briefed about the role and functions of terrestrial and freshwater ecosystems and its contribution to a multitude of ecosystems services. He informed the gathering that, Insects play a central role in the ecosystem and it produce honey, wax, lac, dyes, silk, etc. are beneficial to the mankind. Some insects are plays as bio-control agent and it protects the agricultural crops and enhance the yield. Bees are playing crucial role in the ecosystem, they are not only producing honey, wax, etc. but they are helping in cross-pollination of many trees including orchard species and flowers. Lac insects secretes commercial lac produced from integumentary glands as a protective covering by females and it is lac culture is important livelihood source of forest fringe villagers in Central India. Dactylopius, the cochineal insect of Mexico is found on cacti, dried bodies of females of this scale insect are used for making Cochineal dyes. The silk moth viz., Bombyx and Eupterote will produce silk, reared in India, China, Japan and Europe. Their larvae called silk and the silk fibre is reeled off and used for making silk. Some insects are predaceous, they feed upon and destroy a large number of pestiferous insects. Some insects are scavengers, they eat up dead animal and vegetable matter, thus, they prevent decay. Some ants and larvae of some flies can devour entire animal carcasses. Conservation actions are essential to prevent potential cascading consequences of insect declines, and to help declining populations recover in environment.



Dr. Ashrith K. N's screen





Dr. Ashrith K. N.'s screen



**STUDENTS AWARENESS PROGRAMME
ONLINE ACTIVITY UNDER PRAKRITI
(21.11.2022)**



**STUDENTS AWARENESS PROGRAMME UNDER PRAKRITI
21.11.2022
Institute of Forest Genetics & Tree Breeding, Coimbatore**

The Institute of Forest Genetics & Tree Breeding, Coimbatore organized an offline awareness programme, under “PRAKRITI” for 30 students from Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore on 21.11.2022. The main aim of conducting this programme was to create environmental conservation awareness among the college students. The students were given a brief introduction by Dr. S. Saravanan, Scientist F & Head Extension, IFGTB and he briefed about the IFGTB research activities towards environment and society. Dr. C. Kunhikannan, Director, IFGTB delivered a talk on “Importance of taxonomy”. During his speech, he highlighting the importance of the subject Botany and taxonomy as a branch. Also, he mentioned that, taxonomy is the base for all natural studies and it required self interest to know more about the plant kingdom.

Dr. S. P. Subramaniam, Chief Technical officer, IFGTB, FECC division conducted a practical session on ‘Taxonomy’ including how to go about plant classification, identification, etc. During his speech, he highlighted the different levels of diversity and quantitative description of the different plant species, types of forest, vegetative and altitudinal zonation and distribution of plants. He elaborated the biodiversity hot spots distributed all over India, *in-situ* and *ex-situ* conservation strategies, medicinal uses of plants and trees, etc. He briefed about the threats of biodiversity and various aspects causing that.

Later, the students were taken to herbarium and botanical garden of IFGTB for gaining knowledge on identification, collection, preservation and data collection of the plant materials.





