

WORLD Environment DAY-2017
“Connecting People to Nature”
June 5, 2017

Delhi State Centre of The Institution of Engineers (India) organized a Technical Programme on theme: **“Connecting People to Nature”** on **June 5, 2017** at Institution’s Premises, New Delhi. **On this occasion Dr Chandan Ghosh**, Professor & Head of the Geo-Hazard Risk Management Division, National Institute of Disaster Management, (Ministry of Home Affairs, Govt. of India) was the Chief Guest and delivered the lecture.

Shri Devendra Gill, Chairman, Delhi State Centre, IEI welcoming the Chief Guest highlighted the importance of World Environment Day 2017. He narrated that this year, the theme “Connecting People to Nature” has been well chosen as Environment can be protected only when common people get associated with this mission.

Environment degradation has caused havoc in the society and Climate Change is a potential threat to human civilisation. If urgent steps are not taken serious disaster are likely to happen. The Institution of Engineers (India) has a very important role in promoting the message to the society as well as provide technical knowhow for various stakeholders to manage this challenges in most efficient manner.

In his address Speaker Dr Ghosh narrated that the Growing of Vetiver hedges on contours and adopting conservation tillage practices between them has proved to be an effective method to reduce runoff and soil loss, and increase in-situ moisture, thereby obtaining higher crop yields. The species of Vetiver System (*Chrysopogon zizanioides*), originates in the state of Tamil Nadu, South India, which is now being promoted in nearly 120 countries. It is sterile, non invasive and has to be propagated by clump subdivision. Generally nursery multiplication of bare rooted plants is the preferred method. The average multiplication rate varies but is normally, in a nursery, about 1:30 after about three months. The Vetiver System (VS) can reduce or even eliminate landslides, mudslides, road batter instability, and erosion (river banks, canals, coastlines, dikes, and earth-dam batters).

Some of the various uses of Vetiver Grass discussed during the lecture were:

- **Harvest Rainwater** – vetiver hedges intercept and retain overland flows (storm runoff) and significantly increase soil-porosity in the root-zone
- **Protect Infrastructure** – road shoulders/cuttings/banks, causeways, bridges, pathways, canals, drainage systems Protect Structures – stabilizes unconsolidated banks and cuttings, mitigates flood damage
- **Protect Coastlines** – barrier to windblown sand, grows well in the littoral zone.
- **Protect Waterways** – stabilizes riverbanks, improves water quality (reduces sediment loads) by filtering run-off Stabilize Sloping Land – permanent bioengineering solution against sheet erosion, gully erosion and landslides

- **Protect Flood-prone Land** – slows down overland flows, traps sediments
- **Protect Farmland** – stabilizes slopes, riverbanks and flood zones, does not compete with adjacent crops, vetiver is non-invasive
- **Sequester Carbon** – creates a permanent, massive root system comprised mainly of carbon.
- **Facilitate Reforestation and Plantation Establishment** – increases survival rates and promotes rapid growth of tree seedlings
- **Treat Liquid Wastes** – nutrient removal via massive, fibrous root system and rapid biomass production, removes other pollutants including some heavy metals in leachates.

Shri Praveen Kumar Singh, Honorary Secretary, The Institution of Engineers (India), Delhi State Centre coordinate the event and proposed the vote of thanks.

Nearly 70 members, guests and invitees attended the function.