'Need to save environment, we have already reached the tipping point'

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India currently ranks as the fifth-largest economy in terms of GDP, stressing the need for structural and institutional reforms to achieve a target of \$30 trillion by 2047. India has a potential to ascend to the position of world's thirdlargest economy by 2030, highlighted scientist director general-life sciences, Defence Research and Development Organisation (DRDO), Dr Upendra Kumar Singh at 66th foundation day of CSIR-National **Environmental Engineering** Research Institute (CSIR-NEERI) on Monday.

Various programmes were organised on this occasion. Dr Singh was the chief guest, and Prof B N Goswami, SERB Distinguished Fellow, Department of Physics, Cotton University, Guwahati was the Distinguished Guest...

While addressing the audience, Dr Singh briefed them about the challenges and technologies linked to advancements anticipated in 2047. He emphasised that flagship programmes are essential to bolster the nation and society.

Describing India's first 2G ethanol plant installed at Panipat, Haryana, Dr Singh elu-



Dr. Upendra Kumar Singh, Director General-Life Sciences, DRDO addressing the audience

cidated the process of converting agricultural waste into ethanol, bitumen, and aviation fuel. He also commended the 'One Health' concept, which aims to sustainably balance and optimise the health of people, animals, and ecosystems.

Delivering a lecture on 'The climate change and sustainable development', Prof. Goswami expressed concern over climate change, and said that we need to save environment as we have already reached the tipping point. We need to first address local issues to resolve global issues, he added. He described the iconic hockey stick graph devised by Michael Mann, which illustrates global temperature trends spanning the last 2000 years and unveils a notable pattern of temperature fluctuations.

He pointed out that over the past 200 years, human activities have significantly disrupted the natural balance. Prof Goswami informed that the current level of carbon dioxide in the atmosphere is 423 ppm and methane is 1921 ppb, which are alarming. He stated that India has contributed much less to global warming than other large countries on a per capita basis. He suggested that extracting carbon from the ocean is a better option than from the atmosphere, as it is much cheaper.

Director, CSIR-NEERI Dr Atul Vaidya outlined the genesis of the institute in his welcome address. He described various parameters on which CSIR-NEERI is performing well, including technological developments and planning aligned with the vision for 2047 to ensure sustainable development.

A science models competition was also organised. Around 1,200 students from schools and colleges visited the institute. A voluntary blood donation camp was organised on this occasion.