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Genomics Towards Better Health'

To expose young students to the recent and evolving technologies in genomics and their applications in public health and to provide them an opportunity to broaden their career prospects, the Centre for Interdisciplinary Research and Innovation (CIRI), Kashmir University (KU), in collaboration with the Council of Scientific and Industrial Research-Institute of Genomics and Integrative Biology (CSIR-IGIB) organised a two-day symposium here.

The symposium, titled 'Genomics towards Better Health' brought together participants from within and outside Jammu and Kashmir to explore the multifaceted aspects of genomics and its potential in enhancing healthcare outcomes.

Minister of State (MoS) for the Prime Minister's Office (PMO), and Union Minister of Science and Technology, Dr Jitendra Singh who presided over the valedictory function emphasised the need to understand and harness the power of genomics in healthcare.

Highlighting the significance of diverse cultures and disciplines working together in the

scientific world, he said: "In the field of genomics, collaboration knows no boundaries. To achieve success in scientific endeavours, we must bring together different cultures and perspectives, fostering an environment of innovation and discovery."

Reiterating that genomics is a potent tool for research, drawing significant interest in finding novel treatments for various medical conditions, he encouraged continued growth and integrity in the field of genomics research.

While welcoming Dr Jitendra Singh, KU Vice Chancellor, Prof Nilofer Khan underscored the importance of understanding genomics in the context of better health. She said genomics is emerging as a valuable tool in identifying rare genetic diseases that had previously taken years to diagnose.

Acknowledging the pivotal role played by CIRI in elevating the university's profile on a global scale, Prof Khan said, "CIRI is playing an important role in promoting quality interdisciplinary research and leading in generating funds to set up world-class scientific infrastructure at the university."

While thanking Dr Jitendra Singh, KU Registrar, Dr Nisar Ahmad Mir said genomics is a new phenomenon that has the potential to shape the social and economic fabric through timely diagnosis and treatment of genetic diseases.

"The university is trying to infuse support to develop a centralised facility at KU for the benefit of the masses and is contemplating to start centres on genetics and virology with government support," he said.

Noted endocrinologist and Head, Department of Clinical Research, SKIMS, Srinagar, Prof M Ashraf Ganie highlighted the pivotal role of genomics in the prediction, prevention, and treatment of diabetes while emphasising its significance in evaluating the validity and clinical utility of diseases.

During a special ceremony, Dr Jitendra Singh inaugurated the ICMR India Diabetes Study and Diabetes Educator Programmes at the function.

Senior Scientist IGIB, Dr Munia Ganguli who proposed the vote of thanks at the valedictory

thanked KU VC while hoping to do more such collaborations in future as well.

Meanwhile, during the inauguration held Friday, Director IGIB, Prof Souvik Maiti stressed the importance of introducing genomics at various academic levels and proposed a collaboration with KU to provide training to students of the varsity at his centre in New Delhi.

Dean, Research, KU, Prof Irshad Ahmad Nawchoo encouraged students to explore this interdisciplinary field and emphasised the significance of knowledge and resource sharing for

academic and research development.

Coordinator, CIRI, KU, Dr Altaf Bhat underscored the immense importance of genomics in improving health outcomes and its potential for discoveries, diagnostics, and start-ups in revolutionising the healthcare landscape.

Scientist, IGIB, Dr Sonam Dhamija proposed the vote of thanks while research scholar at CIRI, Dr Wafa Khan conducted the proceedings of the inaugural event.

Published in:

Brighterkashmir

The much-awaited annual 'Open Day' event of Centre for Cellular and Molecular Biology (CCMB), which provides school students an opportunity to personally interact with geneticists and learn about other activities at the premier genetic institute, will be held between 8.30 am and 4.30 pm on September 26.

Due to the Covid pandemic, the earlier editions of Open-Day were held online.

However, since 2022, the Open Day at CCMB has reverted back to being a physical affair and school students and even outsiders can personally interact with researchers and learn first-

hand from them.

It will feature guided tour of CCMB campus and facilities, exhibits and posters on popular topics in modern biology, facts of biological world, conservation genetics and wildlife forensics and science video-shows etc.

On an average, the Open Day is attended by over 10,000 school students from across Hyderabad. The Open Day is an annual celebration at CCMB to mark the Foundation Day of Council of Scientific and Industrial Research (CSIR).

Published in:

Telanganatoday

Monsoon rain on downward trend in state, finds study

Monsoon rain has been on a downward trend in Karnataka during the last six decades, a new study that analysed the pattern in the state over 120 years has found, while also noting the rise of extreme rainfall events (EREs) during this period.

The study by researchers at the Council of Scientific and Industrial Research's Fourth Paradigm Institute (CSIR-4PI) in Bengaluru could offer insights in tackling regional climate change and aid forecasting models for the state.

Krushna Chandra Gouda, Senior Principal Scientist at CSIR-4PI, said the findings presented a

case for greater understanding of regional climate change, indicated as a major contributor to these variabilities.

The researchers studied the India Meteorological Department (IMD)'s daily rainfall data between June and September, for a total analysis period, from 1901 to 2020; this was further divided into two periods — 1901 to 1959 and 1960 to 2020.

While data from the 120-year timeline revealed an increase of 1.15 mm/year in precipitation, analysis of the two halves of the period threw up a significant variability. A precipitation increase - +1.59 mm/year - was observed in the 1901-1959 period. The latter half, between 1960 and 2020, clocked only +0.67 mm/year.

Gouda underlined extreme events that tend to get lost in larger, long-term assessments. "Take the number of rainy days during two monsoon seasons. Over 120 days, one records 87 rainy days and the other, 62 days. In the overall analysis, both could end up being assessed as normal monsoons but what we could miss, in the second case, is extreme rainfall bursts that last for three to four days," he said.

Local factors in play The researchers said the findings could complement future research on monsoon variations in the context of Karnataka's diverse geographic markers — from the Western Ghats to the Cauvery; from its coastline to its forest cover to its expanding towns and cities.

The paper by Gouda, Nikhilasuma P, and Mahendra Benke — both from CSIR-4PI — and Geeta Agnihotri from the Meteorological Centre, IMD Bengaluru, has been selected for publication in the journal Natural Hazards Research.

Extreme heavy rainfall (more than 64.5 mm/day) events were tracked across the decades. A decrease in the number of EREs was noted during the first half of the analysis period; the second half recorded a positive trend.

Major portions of the west coastline and parts of the north consistently reported monsoon EREs. The paper traced this trend to changes in land use which set off regional climate change (rise in temperatures).

The west coast region recorded the highest rainfall across the three periods: more than 900 mm. It also saw the highest variation (excess or deficit) — between 280 mm and 300 mm — due to the combined dynamical and physical effects of the Western Ghats and the Arabian Sea, the study concluded.

International Ozone Day celebrated at MRSPTU

About 200 students from various departments of MRSPTU participated Maharaja Ranjit Singh Punjab Technical University (MRSPTU), Bathinda's Department of Physics in collaboration with 'Punjab State Council for Science & Technology (Environmental Information Awareness Capacity Building & Livelihood Programme), celebrated International Ozone Day for the Preservation of

day. Ozone Layer -2023 here on Fri

The theme "Fixing Ozone Layer and Reducing Climate Change" commemorating the importance of ozone layer preservation and raising awareness about the critical role it plays in protecting life on Earth.

About two hundred from various departments of the University and nearby institutes participated in different events like Poster Making Competition, Model Display, Best Out of Waste, Power Point Presentation and Declamation Contest, organized to educate everyone about the importance of preserving the ozone layer and global efforts to combat ozone depletion.

The winners of the different categories completions were Ravi Raushan, Kunal Singla, Amandeep Mandora, Jaiswaj, Gopesh, Pratiksha & Gurleen (UG/PG Model display competition), Ankita, Keshav, Chetna, Ramandeep & Aashima (Declamation Contest), Manjot Kaur, Ashish Anand, Prince & Komal Kaur (UG/PG Best out of waste competition), Albina, Ravdeep Singh, Ramandeep Kaur, Jaspreet Kaur & Sunveer Singh (Poster Making), and

Ankita, Sahil, Anshpreet & Gurleen (Power Point Presentation). Highlight of the event was the "Ozone Pledge", where all the participants vowed to take personal and collective actions to protect the ozone layer by reducing the use of ozone depleting substances.

Dr. Papiya Mandal, Principal Scientist, CSIR- National Environment Engineering Research Institute (NEERI), Delhi was chief guest on the occasion. She gave an expert talk on the theme "Fixing Ozone Layer And Reducing Climate Change". She underscored the significance of ozone layer shielding life on earth from harmful ultraviolet radiations and emphasized the global efforts required to combat ozone depletion.

The Head of the Department Prof. Sandeep Kansal expressively conveyed that every individual can make a difference in the fight against ozone depletion. The program coordinator Dr. Veena Sharma thanked all the participants, faculty members (Dr. Pooja, Dr. Gagan Gupta,

Dr. Satnam Singh, Dr. Amit Singla, Dr. Supriya, Dr. Mehak, Ms. Sumandeep & Mr. Arpan Sethi) and Staff Members (Sh. Jaswinder Singh, Mr. Rahul Menon, Sh Davinder, Sh. Ravinder and Badal), research scholar Ankita, and students of the organizing team for their keen involvement and making this event successful one.

The event conclude with a Tree-planting ceremony symbolizing the Department's dedication to environmental conservation.

CSIR- CFTRI emphasises on 'Healthy Diet Going Affordable for all' with activities

22nd September, 2023

CSIR – CFTRI focuses on 'Healthy Diet Going Affordable for all'. This is in an effort to create awareness about the importance of nutrition and its role in leading a healthy and disease-free life.

This was in sync with the National Nutrition Week observed annually between September 1 and 7 following an initiative taken by the Ministry of Women and Child Development, Government of India. It aims to educate people about the significance of balanced diets, adequate nutrition, and the impact of the right food choices on improving overall physical and mental health. The government implements programmes to promote awareness about healthy

eating and proper nutrition for maintaining a healthy lifestyle during this week.

In this regard, CFTRI too, organised various activities for government school and colleges in Mysuru.

National Nutrition Week is an annual event observed in India that focuses on raising awareness about the importance of nutrition and its role in leading a healthy and disease-free life. National Nutrition Week accelerates its action towards promoting the nutritional status of women and children. The government is keenly focussing attention on the primary life stages in women – pregnancy, infancy, childhood, and adolescence, thus going with the theme "Suposhit Bharat, Sakshar Bharat, Sashakt Bharat".

The event took off on September 1, with a lecture on Importance of micronutrients in growth and development for school children of Government High School, Hootagalli, followed by a quiz competition. A talk on general nutrition and benefits of millets was organised on September 4 for students of Government Junior college, Vontikoppal, Mysuru, and a 'pick and speak' competition on various concepts of nutrition was conducted. A debate competition was

organised on 'Benefits of traditional vs modern foods' for high school children in CFTRI school and the importance of good nutritional practices was emphasised. Essay writing competitions were conducted for CFTRI students and employees on lifecycle nutrition.

The week was concluded by the valedictory function wherein Dr Praveen Kulkarni, Professor in Community Medicine and Vice-Principal, JSS Medical College, Mysuru, addressed the gathering and he touched upon the current nutrition scenario, dietary practices and corrective measures from the medical perspective.

He elaborated on the actions needed to make healthy diets more available and accessible for all Indians and sustainable diet recommendations. The session was presided by Director nominee, Dr. Vijayanand, Chief Scientist and Head, Fruit & Vegetable Technology, CSIR - CFTRI, who emphasised on the dietary approaches as solutions for correcting malnutrition and mentioned

about the malnutrition alleviation programmes undertaken by CSIR –CFTRI in his remarks.

Winners of the various competitions were awarded with certificates and mementos during the event. The awareness programme covering more than 300 students was very well received and appreciated by the children and teachers.

Week long events conclude at CSIR-IIIM Jammu

CSIR- Indian Institute of Integrative Medicine (CSIR-IIIM), Jammu conducted a week long programme, which concluded today with grand valedictory function in which Prof Neelu Rohmetra, Director, Directorate of Distance and Online Education (DD & OE), University of Jammu, was the chief guest.

While addressing the audience, participants

and the winners of various events conducted during the week, Prof Neelu Rohmetra appreciated the efforts of CSIR-IIIM, Jammu for the promotion of Hindi language besides doing cutting edge science. She said the institute has Pan India representation of S&T staff thus it provides a platform for knowledge, culture, ethos and lingual harmonization and integration.

On the occasion, Prof Neelu Rohmetra also distributed the prizes to the winners of various competitions held during the past week. Earlier, Dr Zabeer Ahmed, Director, CSIR-IIIM, Jammu, emphasized on the importance of preserving and propagating our cultural and linguistic heritage. Sanjay Sharma, Hindi Officer of CSIR-IIIM, Jammu gave the detail of various events conducted during the past week.

Sumit Roy, Technical Assistant, secured first position in Essay Writing competition while Manish Kumar, Technical Officer secured second and Priya Kumari, Research Scholar secured third positions with Rakesh Chowdhary, Sr Secretarial Assistant (S&P) and Nirmala Kumari, Teacher, RRL High School got the consolation prizes in this category.

In the Speech competition, Shafali Bhasin, Bhupesh Kr Sharma and Priya Kumari were first,

second and third winners respectively while two students of RRL High School – Vani Kapoor and Poorvi Kalsi got consolation prizes. In the Translation competition, Akhil Verma, JSA, Rakesh Chowdhary, SSA and Urvashi Dhiman, won first, second and third prize, respectively while as Lovely Sharma and Nirmala Kumari, teachers in RRL High School, received

consolation prizes.

The employees of CSIR-IIIM, Jammu were also judged for Annual Performance in Official Work in Hindi for the financial year 2022-23. Jyoti Prabha, Receptionist (F&A) secured first position; Jyoti Devi, Jr Stenographer (S&P), got second position while the third position was jointly shared by Ramesh Mottan, Section Officer, Rakesh Chowdhary, SSA and Manish Kumar, Technical Officer. Buaditta, ASO, Yogesh Kumar, Technical Officer, Abhishek Gupta, Jr Stenographer, Nisha Vij, ASO and Vikas Patiaya, Section Officer received consolation prizes.

Prominent among others present on the occasion, were Er Abdul Rahim, Head RMBD &IST; Vikram Singh, Sr Controller of Administration; Ajay Kumar, Daleep Gehlot. Sanjay Sharma, conducted the proceedings while Rajesh Gupta, presented formal vote of thanks.

Hyderabad Scientist Dr. G. Umapathy receives prestigious Fellowship for conservation research

22nd September, 2023

Senior Principal Scientist from Hyderabadbased Centre for Cell and Molecular Biology (CCMB), Dr.G. Umapathy has been awarded Fellowship in Reproduction and Endocrinology by the Society for Reproductive Biology and Comparative Endocrinology.

Dr Umapathy is involved in research on understanding habitat fragmentation and its impact on the survival of endangered species in human-dominated landscapes. The group headed by the senior scientist at the CCMB is involved in studying behaviour, demography, reproductive and stress physiology, and genomics.

Dr Umapathy's group is also developing various biotechnological tools in biodiversity conservation including eDNA tools in the aquatic ecosystem for studying ecosystem services.

Telanganatoday

CSIR – IGIB and KAMP Celebrates "One Week One Lab" with 1100 students

CSIR-IGIB (Council of Scientific and Industrial Research – Institute of Genomics and Integrative Biology) and KAMP (Knowledge and Awareness Mapping Platform), an initiative of CSIR – NIScPR & NCPL, marked a significant milestone during the "One Week One Lab" celebration. This event was attended by more than 1100 students from grades 5 to 12 who are part of the KAMP program.

As part of the "One Week One Lab" festivities at CSIR-IGIB, a captivating Scientific

Excursion was organized at the CSIR-IGIB campuses on Mathura Road and Mall Road. Dr. Souvik Maiti, Director of CSIR-IGIB, warmly welcomed the students and encouraged them to inspire their peers and family members to explore the world of science by visiting the laboratory. During the event, Ms. Poorti, Project Scientist at CSIR-IGIB, announced the inauguration of a cutting-edge laboratory named the "Ramanujan-Hardy Lab" at the CSIR-IGIB Mathura Road campus. This lab was inaugurated by Mr. Aryan Mishra, a young astronomer and the Founder of Spark Astronomy. The Ramanujan-Hardy Lab aims to attract and nurture unconventional thinkers and innovators among school students.

Throughout their visit, students had the privilege to gain insights into the inner workings of a laboratory and the operation of various scientific instruments. They were guided through all the laboratories within CSIR-IGIB, including the Zebrafish facility, Transmission Electron Microscopy, and Scanning Electron Microscopy. In addition, students had the opportunity to attend a special popular science talk titled "The Plant Perspective," presented by Dr. P. V. Shivaprasad, Associate Professor and Associate Dean of Faculty at the National Centre for Biological Sciences (NCBS).

The primary objective of this Scientific Excursion was to empower students to explore, engage, experience, and develop a passion for the world of science. Students were provided with live demonstrations and hands-on experiences in the laboratory, igniting their curiosity and enthusiasm for scientific discovery. Various hands-on activities and engaging games, quizzes, scavenger hunts, and treasure hunts kept the students actively involved and

entertained.

Ms. Arika Mathur, Head of Operations and Assessments at KAMP, introduced the KAMP initiative and highlighted its aim to identify and nurture students' skills and talents. She explained that KAMP conducts the National Assessment for Scientific Temperament & Aptitude (NASTA) and offers a range of activities such as Knowledge Sharing Sessions, Scientific Excursions, and Continuous Professional Development Programs for teachers. Ms. Mathur also shared details about upcoming Scientific Excursions at ISRO-NRSC, CSIR-IITR, ISRO-VSSC, and CSIR-CSIO. She concluded her address by encouraging all students to "Ask

questions, Seek answers, and Never stop being curious!"

About CSIR-IGIB and KAMP:

CSIR-IGIB, the Council of Scientific & Industrial Research-Institute of Genomics and Integrative Biology (IGIB), is a prestigious scientific research institute primarily focused on biological research. It plays a crucial role in national research endeavours related to genomics, molecular medicine, bioinformatics, and proteomics.

KAMP, an initiative and knowledge alliance between the Council of Scientific & Industrial Research (CSIR) - National Institute of Science Communication and Policy Research (NIScPR) and its industrial partner, M/S Nysa Communications Pvt. Ltd. (NCPL), is dedicated to fostering creativity, meaningful learning, critical reading, and thinking skills,

thereby unlocking the inherent potential of students.

Stakeholders call for self-reliant, cost-effective shift in chemicals

sector

The chemicals sector in the country needs to be more self-reliant and cost-effective to bring down its dependence on external sources by strengthening the collaboration between research and development institutions and industry, industry stakeholders said here on Friday.

They were speaking at the Industry Connect meet on 'Chemical Synergy: Bridging Industries with Synthetic Expertise,' organised by Council of Scientific & Industrial Research-National Institute for Interdisciplinary Science and Technology (CSIR-NIIST).

Setting the context for deliberations, C. Anandharamakrishnan, Director, CSIR-NIIST,

Thiruvananthapuram, highlighted India's significant role as an exporter of chemicals, especially specialty chemicals.

In his address, ElixGlobal Mentor Srinivas Lanka emphasised the need to minimise dependence on external sources like China and called for self-reliance in the chemicals sector. He noted the importance of developing cost-effective methods for drug intermediates, identifying flow chemistry and enzyme technologies as promising areas for immediate exploration.

Stressing on the necessity to keep costs low while developing agrochemical molecules, Vice president, Crystal Crop Protection Ltd., Rajeev R. Jha called for a collaborative approach involving both scientists and engineers from the onset to address potential challenges, including environmental considerations.

Santosh Nandan, Managing Director, Ambernath Organics Pvt Ltd. explained the importance of data collection of chemical reactions to create a comprehensive database. He also urged for economic considerations in research, besides stressing on the importance of reproducibility in

scientific endeavours. Panel discussions on various topics ranging from chemical and pharmaceutical sector, exploring the untapped potential within India's specialty and fine chemicals landscape to research and development hurdles in the chemicals and pharmaceuticals industry were also held.

CCMB ropes in AWS to speed up genomics research in India

22nd September, 2023

The Centre for Cellular and Molecular Biology (CCMB), a research organisation focused on modern molecular biology and population-scale genomics, has chosen AWS as its preferred cloud provider to accelerate its genomics research projects.

With AWS, CCMB would be able to reduce time taken for genomics analysis by up to 98%, accelerating research efforts on the study of genetics and human diseases, said the cloud provider on Friday.

Life sciences and genomics research organisations need to access, store, and analyse large amounts of data, generated from next generation high-throughput sequencers. Previously, these organisations have relied on on-premises servers to meet their storage and compute needs. The data-intensive nature of genomics research meant that CCMB had to procure more on-premises storage frequently to manage petabyte scale datasets, and store the raw data and the resultant output files generated from secondary and tertiary analysis. According to AWS, CCMB was also relying on on-premises high-performance computing (HPC) clusters to perform this analysis, which was prone to downtime, impacting research timelines and output. Using on-premises servers created challenges for scalability and performance, so CCMB turned to cloud computing to seamlessly scale up its data storage and analysis needs.

"At a time when genetics research is becoming critical for life sciences advancement, disease diagnosis, and drug development, we must innovate using technologies like cloud computing to achieve outcomes faster and better," said Dr. Divya Tej Sowpati, genomics scientist at the CSIR CCMB."

Running on AWS, CCMB performed short tandem repeat (STR) genotyping — an analysis to determine a person's DNA profile — on 3,200 samples from the 1,000 Genomes Project, an international research effort to establish a detailed catalogue of human genetic variation. Using services such as Amazon Aurora, Amazon Elastic Compute Cloud (Amazon EC2), EC2 Auto Scaling, Amazon Simple Storage Service (Amazon S3), and AWS Batch, CCMB was able to reduce the time taken for research analysis by up to 98%, from 550 days to just nine days on average, he said.

SC to pass orders on sale, use of firecrackers in Delhi on September 22

22nd September, 2023

The Supreme Court on September 22 is scheduled to pronounce orders on pleas to lift the prohibitions on firecrackers in the national capital. A Bench of Justices A.S. Bopanna and M.M. Sundresh will pass the order.

When the court had reserved the case for order, the Bench had said that filing cases against persons bursting crackers during festivals like Deepavali may not be the solution against the dangers fireworks pose to health and environment.

"Cases against persons bursting firecrackers may not be the solution. You will have to find the

source from where it [firecrackers] are coming and stop that," Justice Bopanna had addressed the Delhi police.

The court was reacting to a report submitted by Additional Solicitor General Aishwarya Bhati, for the Delhi police, on the number of cases registered against sale, storage and bursting of crackers and number of persons arrested, etc.

The police statistics presented in the apex court show that from 2016 to August 31, 2023, 926 cases were registered for sale and storage of firecrackers and 3120 cases filed for bursting

crackers.

The police had arrested 2,616 persons for bursting crackers and 740 for sale and storage. The police said 51,692.413 kg of firecrackers were seized in Delhi from 2016 to August 2023.

The huge inflow of crackers had persisted despite a ban imposed on them by the Supreme Court. The National Green Tribunal and the Delhi government had also prohibited the sale and bursting of firecrackers.

However, amicus curiae, senior advocate Gopal Sankaranarayanan said crackers made their way into the national capital, especially ahead of the Deepavali season in November.

Ms. Bhati said the Delhi police were giving top priority to prevent the sale, storage and bursting of fireworks. District police chiefs had constituted flying squads, unauthorised stocks have been seized and sealed and an awareness campaign is on.

In an earlier hearing, Ms. Bhati, also appearing for the Petroleum and Explosives Safety Organisation (PESO), had said the government entity was taking steps to expedite the usage of green crackers. An affidavit filed by the PESO said fireworks manufacturers licensed by the government body had already been instructed to comply with the Supreme Court directives on green crackers. This includes getting emission tests done on the green crackers from CSIR-NEERI.

Revival of polluted River Sal ongoing: Water Resources Dept

21st September, 2023

Amid growing concerns regarding the deteriorating condition of River Sal, including issues related to pollution and the quality of desilting and aeration projects, officials from the Water Resources Department (WRD) say they have been taking measures to rejuvenate the river.

"The department has conducted desk studies, focusing on hydrology, hydraulics, soil erosion, groundwater, and improvements to earthen banks, among other aspects, to enhance ground and surface water, flood control, and bank erosion control. We have devised a holistic plan that will be implemented in phases," explained Minister for Water Resources, Subhash Shirodkar.

The WRD has collaborated with the River Rejuvenation Committee (RRC-Goa), established by the Department of Environment, Goa, under the chairmanship of the Secretary of Environment, to prepare an action plan for the restoration of a segment of the Sal River.

The initial phases involve enhancing the river's hydraulic capacity through desilting and channel improvements, covering a length of 19.77 kilometres from its origin to Lourdes Chapel-Navelim, including its tributaries, said officials from the WRD.

The restoration work involves the removal of accumulated silt and debris to increase the

river's carrying capacity. Additionally, a three-year maintenance period is included in the contract to ensure the river remains free of obstructions and silt, with the agency responsible for ongoing

maintenance.

The second phase focuses on improving water quality. This entails constructing storage structures (bhandaras) and installing an aeration system near the fish market, equipped with an automated gate to control water levels. The stored water undergoes aeration using floating

aerators to enhance Dissolved Oxygen (DO), reduce Biological Oxygen Demand (BOD), and enhance physical parameters such as turbidity, colour and odour, while also providing biobeds.

Steps to safeguard the biodiversity in the villages along the riverbanks, are being carried out by village-level biodiversity management committees. Minister Shirodkar referred to an ongoing sand mining impact assessment study report conducted by the Goa State Biodiversity Board (GSBB) in collaboration with CSIR-NIO. This study includes river biodiversity indices and environmental management plans, with a focus on documenting river biodiversity.

Concerns about sewage pollution from the Sewerage Treatment Plant (STP) in Shirvordem-Navelim, are being investigated by the PWD and the Sewerage & Infrastructural Development Corporation of Goa Ltd (SIDCGL), said WRD officials. An Online Continuous

Effluent Monitoring System (OCEMS) has been installed at the 20 MLD STP in Shirvodem to monitor treated water quality before discharge into the Sal River. Currently, OCEMS is undergoing trial runs.

CSIR-Floriculture Mission gave 120 farmers 27 thousand Gerbera and 25 thousand Gypsophila planting material

21st September, 2023

SIR-Institute of Himalayan Bioresource Technology (CSIR-IHBT), Palampur 19 On 20 September 2023 under the CSIR-Floriculture Mission in Himachal Pradesh, Punjab and 120 farmers of Uttarakhand were given 27 thousand Gerbera and 25 thousand Gypsophila planting materials. Made distribution. CSIR-Floriculture Mission is a nationwide program designed to utilize the technologies of CSIR.

To increase farmers' income and develop entrepreneurship through high-value floriculture by using It is being implemented in 22 states with the aim of Also, CSIR-IHBT in the country Has been continuously active in promoting the business of flower farming. Open and protected near the institute Standardized technologies are available for plant propagation and flower cultivation in the environment.

On this occasion, Dr. Sudesh Kumar Yadav, Director of CSIR-IHBT said that the The disease-

free quality planting material provided under this scheme is given to the farmers at 90 percent subsidy. Which is helpful in increasing the income of farmers. Dr. Bhavya Bhargava, Mission Nodal Officer of CSIR-IHBT said that this year the institute will Will provide quality planting material to cover 174 hectares area in the states. To provide best quality planting material to the benefited farmers from different states. Expressed gratitude to CSIR-Floriculture Mission and CSIR-IHBT.

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