ANNUAL REPORT

SDG-3
GOOD HEALTH AND WELL-BEING

UNIVERSITY OF CHITTAGONG

Chittagong-4331, Bangladesh

SGD3: GOOD HEALTH AND WELL-BEING

Chittagong University (CU) is vital in advancing SDG 3, which focuses on ensuring good health and well-being. The university addresses various health challenges through innovative research and collaboration and contributes to local and global health improvements.

CU's Department of Microbiology leads impactful projects such as Understanding the Dengue Epidemic in Chattogram, providing valuable insights into disease transmission patterns to help control outbreaks. The Regional Collaboration in Microbial Knowledge project strengthens local and regional efforts to tackle antimicrobial resistance and emerging diseases. The Department of Botany contributes to public health through Sustainable Mosquito Control, developing plant-based solutions for environmentally friendly mosquito management. CU also promotes health through Ecological Education, which raises awareness about the connection between environmental factors and health risks, fostering healthier communities. The university's contributions include cancer awareness, snakebite envenomation, and genetic research. CU's International Biotechnology Conference 2024 will showcase next-generation biotechnology solutions to improve health. The Breast Cancer Awareness initiative and study on Symptom-Based Treatments for Snakebite Envenomation highlight CU's commitment to tackling pressing health issues. Additionally, CU's Research on Genetic Determinants of the Chittagonian Population for Autism Spectrum Disorder offers crucial insights into the genetic factors influencing local health.

Environmental health is another priority for CU. The Impact of Shipbreaking Industry on Soil and Food Safety in Chittagong research identifies the risks of heavy metal contamination in food crops, helping mitigate health hazards. Projects focusing on Conserving Freshwater Fish Habitats Amidst Climate Change and Snakebite Poisoning Projections demonstrate the university's dedication to sustainable health solutions.

Lastly, CU's Laughter Club initiative promotes Mental Health by creating a supportive environment for students and staff. Through these diverse efforts, Chittagong University is significantly advancing public health and contributing to the achievement of SDG 3.

IMPACTS WE ARE MAKING

Understanding the Dengue Epidemic in Chattogram

A recent study on dengue prevalence in Chattogram has highlighted Chittagong University's pivotal role in addressing this public health crisis. The research revealed that 75% of dengue cases in Chattogram were due to the Dengue 2 serotype, with Dengue 1 and Dengue 3 making up 11% and 14% of infections, respectively. Significantly, the Dengue 4 serotype was absent from the patient samples collected.

Chittagong University's ***Department of Genetic Engineering and Biotechnology*** spearheaded the study's genome sequencing efforts (**Figure 1**). Samples were analysed in CU labs and validated at icddr,b, ensuring the reliability of findings. The research identified high infection rates in specific urban hotspots, marking Chattogram as Bangladesh's second-most affected region.

The study also revealed a concerning lack of awareness: 20% of patients were unaware of mosquito-borne transmission, and 40% had not used mosquito nets. These insights highlight the urgent need for improved public health initiatives in the area.

Through this research, Chittagong University demonstrates its commitment to SDG 3 (Good Health and Well-Being), addressing dengue with evidence-based strategies that serve the region's specific needs.

The Daily Star

ı Sports Business Entertainment Life & Living Youth Tech & Startup Multim

75pc dengue patients in Ctg infected with Den-2 serotype: study

Photo: Courtesy

At least 75 percent of dengue patients have been infected with Dengue 2 serotype in Chattogram this year while 11 percent with Dengue 1 and 14 percent with Dengue 3 serotypes, according to a study.

However, Dengue 4 serotype, one of the four serotypes of Dengue, has not been found in any patient in the research.

***Figure 1**. Media coverage of Chittagong University led to research in the local daily.*

Article link: Circulating dengue virus serotypes, demographics, and epidemiology in the 2023 dengue outbreak in Chittagong, Bangladesh - PubMed
European journal of microbiology & immunology, *14*(3), 272–279.
Research coverage in National Daily: 75pc dengue patients in Chittagong infected with Den-2 serotype: study | The Daily Star

Sustainable Mosquito Control: Innovative Research from the Botany Department at Chittagong University

Chittagong University's Botany Department has made noteworthy advancements in the fight against *Aedes* mosquitoes, which are primarily responsible for dengue fever. This research

emphasizes natural, environmentally friendly alternatives to chemical insecticides, focusing on sustainable methods that align with local ecosystems. Through careful study and experimentation with plant-based solutions, the department's team has brought findings that could revolutionize mosquito control strategies in Bangladesh and surrounding regions.

The study identified 19 herbal extracts—including those from *Sarpagandha*, *Bongada*, *Fulkur*, *Nakful*, and *Golmorich*—demonstrating 100% efficacy in eliminating mosquito larvae. Four additional extracts showed 90-99% effectiveness, while several more ranged between 50-89% effectiveness. Unlike many conventional insecticides, these herbal extracts are highly potent and safe for the environment and pose no health risks to humans.

Conducted in strict adherence to international research protocols, the study involved collecting mosquito larvae from 57 locations and testing 250 plant extracts to ensure comprehensive and reliable results. This innovative approach underscores the department's dedication to creating sustainable and effective mosquito control solutions that address the need for eco-friendly public health measures.

Figure 2. Investigating herbal remedies for controlling mosquitoes to control Dengue.

This research places Chittagong University at the forefront of sustainable vector control, with the potential to inspire widespread adoption of safe, plant-based practices to control mosquito populations. It holds promise for reducing the spread of mosquito-borne diseases in densely populated areas, holistically supporting public health and environmental preservation.

Newspaper link: _____, _____ | _____

Advancing Microbial Knowledge for Health and Well-being: A Regional Collaboration

The **Microbiology Department** at Chittagong University (CU) recently hosted a pivotal symposium titled, *"Navigating the Path to Antimicrobial Stewardship: Strategies, Challenges, and Collaborative Solutions."* This event, held **in partnership with the Bangladesh Society of Microbiologists (BSM)**, underscores the department's proactive role in equipping regional

scientists with the latest insights in microbiology to strengthen their preparedness for future pandemics and enhance public health resilience.

Figure 3. Public engagement of a speaker during the symposium arranged by the Microbiology department.

The symposium brought together renowned experts, including Dr. Munirul Alam from the **International Centre for Diarrheal Disease Research, Bangladesh (icddr,b)**, and Professor Muhammad Manjurul Karim from **Dhaka University**'s Microbiology Department, both of whom presented impactful keynote speeches.

Additional presentations by Assistant Professor Avijit Datta of **Chittagong Veterinary and Animal Sciences University** and Research Fellow Jannatul Ferdouse of the **Bangladesh Council of Scientific and Industrial Research** contributed to a rich exchange of ideas on antimicrobial stewardship. This event reinforced Chittagong University's commitment to public health. It highlighted the **Microbiology Department's ongoing efforts to advance essential microbiological knowledge, establish strong partnerships, and actively support the development of health-focused solutions within the community**.

Initiatives like this symposium demonstrate the Microbiology Department's dedication to leading collaborative efforts in addressing the challenges of infectious diseases. Through continued support for educational events and interdisciplinary collaboration, the department contributes significantly to the collective readiness of scientists and healthcare professionals, equipping them to tackle pressing health threats effectively.

Daily newspaper article link: [CU Microbiology dept holds symposium on antimicrobial stewardship.]

Genetic Determinants of the Chittagonian Population for Autism Spectrum Disorder (ASD)

The Autism and Disability Research Group at Chittagong University since 2017, working with Proyash Chattogram, a local organization that supports individuals with autism spectrum disorder (ASD), to find the causes of variations in specific genes that may contribute to developmental and functional obstacles in autistic children's brains. These genetic factors can impact children's social interactions, behavioral responses, and learning processes. Their initiative marks a significant milestone in autism research in Bangladesh, which could find a way for more effective solutions to address these challenges in the future.

Figure 4. Dissemination of whole exome sequencing data to the local community with ASD.

Recently, this group significantly contributing to the local community by creating awareness and disseminating their initial phase of genomic sequencing research on twenty children with autism. This project aimed to identify the genetic determinants of ASD in the Chittagonian population, providing crucial insights for future treatment plans. The findings, delivered by expert bioinformaticians from the group, will help patients utilize the analysed report for personalized treatment and appropriate medication identification, empowering them to manage their condition better.

The analysis, valued at approximately $400 per sample, was offered to participants free of charge. This was made possible through the commitment of the Autism and Disability Research Group to society, ensuring that those with ASD—especially individuals who lack the financial means to afford such advanced genetic testing—could benefit from cutting-edge medical research. This

initiative exemplifies Chittagong University's dedication to supporting local communities and promoting inclusivity for individuals with special challenges.

Under the leadership of Professor Dr. Lolo Wal Marzan, Dr. Md. Mahbub Hasan and Yasmin Akter of the **Genetic Engineering and Biotechnology Department**, the group's work advances scientific knowledge and fosters social responsibility. By providing these essential services at no cost, the university ensures that individuals with ASD, regardless of their financial background, have access to valuable genetic insights that can enhance their quality of life and health outcomes. This initiative is a testament to Chittagong University's ongoing efforts to make a meaningful difference in the lives of those in need.

News article link: _____ |
Social media link: (1) _____ ' _____ ... - Proyash Chattogram | Facebook

Promoting Health and Well-Being through Ecological Education

*Chittagong University's **Zoology Department** is enhancing health and well-being awareness among students and the broader community through educational study tours, such as those organized for **Leaders' School & College Chattogram**. These tours allow young learners to understand animals' critical roles in sustaining a balanced ecosystem directly linked to community health and environmental well-being. By exploring the university's **Zoology Museum**, students gain insights into conservation efforts, including preserving river ecosystems essential for clean water, food sources, and reduced disease transmission (*

Figure 5).

The tours also cover vital safety knowledge, such as how to avoid harmful animals like cobras and the role of antivenoms in medical emergencies, empowering students with skills that can reduce potential health risks in their communities. Through this engagement, Chittagong University fosters a generation of students who appreciate ecological balance, understand the intersection of health and conservation, and recognize their roles in contributing to a healthier, more sustainable environment in alignment with SDG 3.

***Figure 5**. Disseminating how animals around us contribute to ecosystems and the well-being of School pupils.*

Social media link: https://www.facebook.com/share/v/K8hz1dBRkWrT4FGA/

International Biotechnology Conference 2024: Paving the Future of Next-Generation Biotechnology for Health and Wellbeing

The Department of ***Genetic Engineering and Biotechnology*** at Chittagong University hosted the International Biotechnology Conference 2024 under the theme "Next-Generation Biotechnology: Toward Extraordinary Achievements." In collaboration with the National Institute of Biotechnology, the event brought together prominent scientists, academics, and industry leaders to discuss biotechnology's role in sustainable development and public health.

The conference centred on five major themes, including medical, agricultural, and environmental biotechnology, addressing essential public health issues like antibiotic resistance and advanced therapeutics. Presentations highlighted impactful research from Bangladesh and beyond, such as plant-based agricultural solutions and DNA-driven medical diagnostics. Through these discussions, the Department of Genetic Engineering and Biotechnology underscored its mission to inform and prepare regional scientists for emerging health challenges, while promoting collaboration for broader scientific impact.

A remarkable "***Women in Science***" session featured prominent female scientists, inspiring young women in the audience to pursue scientific careers. Chaired by Professor Dr Nazneen Nahar Islam, the session emphasized resilience, family support, and societal encouragement as crucial for women in science. This empowering initiative exemplified the department's dedication to fostering an inclusive research environment, ensuring that women play a significant role in shaping the future of biotechnology and public health.
Newspaper Link: _____

Figure 6. Plenary session in IBC 2024 arranged by the Genetic Engineering and Biotechnology department.

The University Collaborates with Industries for Breast Cancer Awareness

Chittagong University is actively engaging with local industries to raise awareness about breast cancer and promote early detection through screening programs. According to experts, one in every eight women globally is at risk of breast cancer, and despite its prevalence, there remains a significant lack of awareness in many communities, including in Bangladesh. On October 21, 2024, as part of Breast Cancer Awareness Month, the university hosted a seminar to discuss the causes, prevention, and treatment of breast cancer and free screening programs for the local community and university students and staff.

Dr Nasir Uddin Mahmud Shuvo, a clinical oncologist at Chittagong Medical College Hospital, highlighted the social stigma and embarrassment surrounding discussions about breast cancer, which often prevent individuals from seeking timely help. However, early detection and treatment can significantly improve recovery outcomes. In this context, Chittagong University is making crucial progress by integrating industry support into its awareness efforts. The event saw a collaboration with ***Beacon Pharma***, which sponsored a breast cancer screening program, allowing women to undergo medical check-ups and receive prevention advice.

The university's involvement goes beyond hosting seminars. Professor Dr. Mohammad Mosharraf Hossain from the ***Department of Biochemistry and Molecular Biology*** presented his research on the causes and treatment of breast cancer, emphasizing the role of timely intervention. Faculty members from the ***Department of Botany*** and ***Chittagong University Medical Center*** also participated, reinforcing the importance of community health initiatives.

This collaboration between the university and the pharmaceutical industry, including the screening program, provides an accessible platform for both the local and university communities to gain critical knowledge about breast cancer prevention and early detection. By engaging industry partners, Chittagong University is playing a vital role in creating awareness and fostering a proactive approach to health care in the region, contributing to the broader goal of improving public health and well-being in line with SDG 3.
Local news portal link: _____

Advancing Symptom-Based Treatments for Snakebite Envenomation

The Zoology Department of Chittagong University is at the forefront of research on snakebite envenomation, addressing a critical health issue prevalent in Bangladesh and neighbouring regions. A recent study conducted by the university focused on the venom of *Trimeresurus erythrurus* (Red-tailed bamboo pit viper), a species contributing significantly to snakebite cases in Bangladesh, India, Myanmar, and Nepal. Given the lack of specific antivenoms and the socioeconomic challenges in these areas, this research aims to support the development of symptom-based treatments that can mitigate the severe health impacts of envenomation.
The study involved detailed profiling of *T. erythrurus* venom toxins and assessments of their toxicological effects, revealing a high concentration of harmful components, including Snake Venom Metalloproteases (SVMPs), Serine Proteases (SVSPs), Phospholipase A2 (PLA2), L-

amino Acid Oxidases (LAAOs), Myotoxins, and Disintegrins. Tests showed significant toxic effects, with a median lethal dose (LD50) of 1.131 mg/kg and substantial hemorrhagic, edematogenic, and hemolytic activity. Additionally, the venom caused pathological changes in various organs, such as the skin, lungs, heart, kidneys, and intestines.

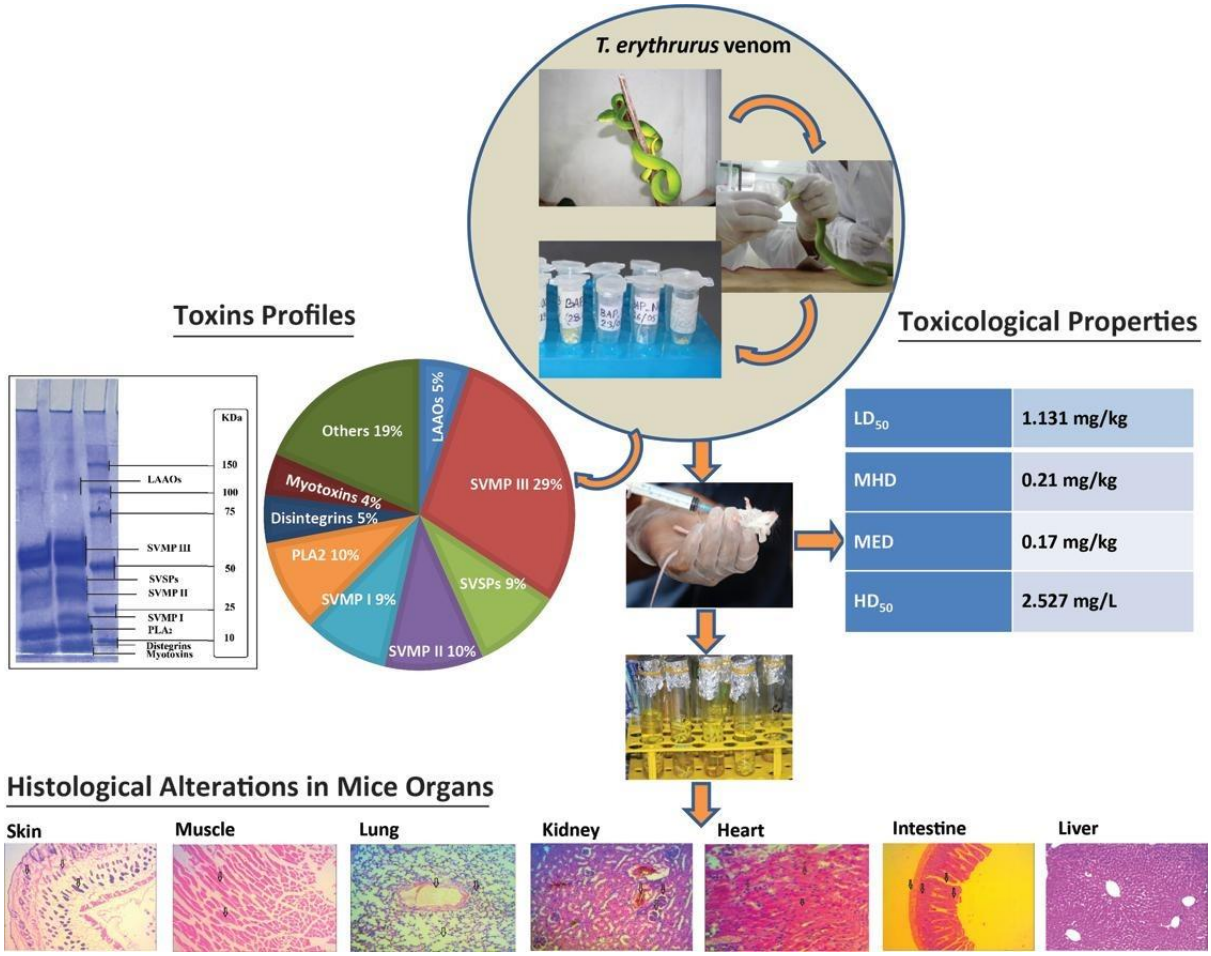

***Figure 7**. Methodology by how the authors predicted symptom-based treatments*

The implications of these findings are profound, as they offer a foundation for symptom-based treatments that target the specific physiological impacts of T. erythrurus venom (

Figure 7). By advancing knowledge of venom toxicity and its organ-specific effects, Chittagong University contributes to developing more accessible and effective medical interventions for snakebite victims. This research supports SDG 3 by addressing a significant health risk and highlights the university's role in tackling local health challenges through innovative, regionally relevant scientific research.

Research article link: Toxins profiles, toxicological properties, and histological alteration potentiality of Trimeresurus erythrurus venom: In vitro and in vivo experiments - ScienceDirect
Journal of King Saud University-Science, *36*(5), 103150.

Safety First: Workshop on Protecting Health and Nature

Chittagong University recently hosted a workshop titled **"Biological Safety: Principles and Practices"**, led by the esteemed Prof. Dr. Md. Atiar Rahman from the ***Department of Biochemistry and Molecular Biology***. This workshop brought together a diverse group of participants, including local researchers from Chittagong, faculty members, laboratory staff, and senior students from the fourth year and MS levels across different university faculties (**Figure 8**).

Figure 8*. Snap from the workshop on biosafety hosted by the Department of Biochemistry and Molecular Biology.*

The workshop underscored Chittagong University's commitment to health and safety in the research environment. With the increasing use of biological materials in research, the university recognizes the critical need for stringent biological safety protocols. Prof. Rahman shared insights on identifying and mitigating potential risks associated with biological research, emphasizing best practices in handling hazardous biological agents. Participants learned about risk assessment techniques, proper containment methods, and personal protective equipment (PPE) to ensure a safe working environment.

A central theme of the workshop was the safe management of hazardous biological waste. The university highlighted its responsibility to protect researchers, laboratory personnel, and the broader community and ecosystem. By training participants in effective waste disposal techniques, Chittagong University aims to minimize the environmental impact of laboratory research, thereby helping to safeguard both human health and biodiversity in surrounding areas.

This workshop is vital to cultivating a safety-conscious culture within the university, aligning with global standards of biological research safety and environmental responsibility.

Novel Therapeutic Development Through Carbohydrate and Nucleoside Chemistry

The University of Chittagong, through its **Department of Chemistry**, has made significant contributions to advancing research in synthetic organic chemistry and glycobiology, with a particular focus on developing new compounds for therapeutic applications. Under the leadership of Dr. S. M. Abe Kawsar, the department has gained recognition for its work on the synthesis and characterization of carbohydrate and nucleoside derivatives, crucial for expanding the understanding of their potential in treating diseases.

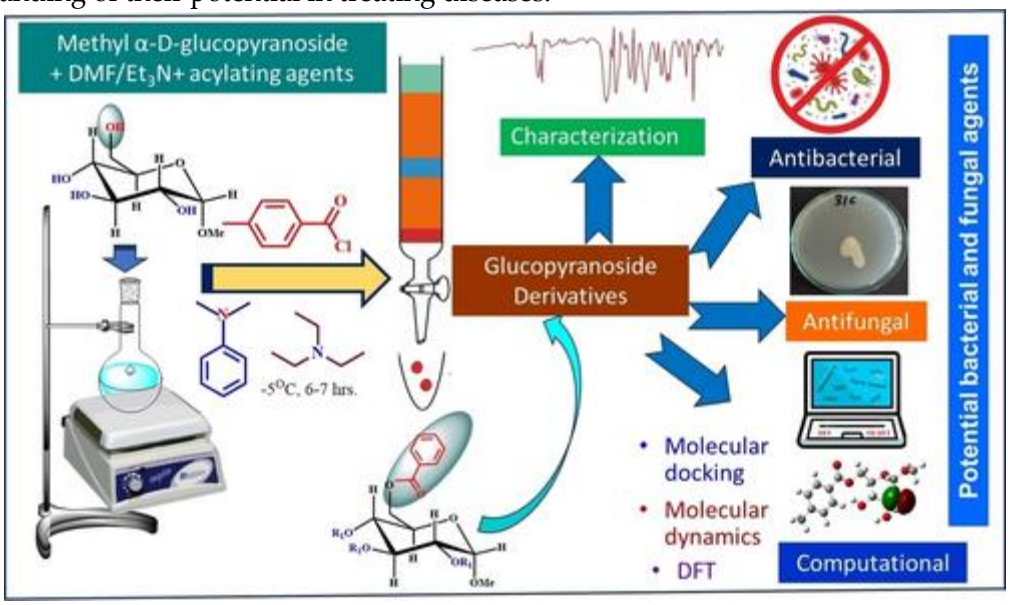

***Figure 9**. Drug discovery workflow used to develop novel therapeutics at Chittagong University.*

Dr. Kawsar's research has further enriched the field by exploring glycans in biological systems and utilizing computational chemistry to predict how synthesized compounds interact with microbial proteins. This interdisciplinary approach is key to the department's impact on advancing molecular medicine. Additionally, the department's efforts in evaluating antimicrobial agents, particularly mannopyranoside and glucopyranoside derivatives, have contributed to the discovery of compounds with promising antimicrobial properties.

Through studies on ADMET (Absorption, Distribution, Metabolism, Excretion, and Toxicity), the Department of Chemistry ensures that these newly synthesized compounds are effective and safe, playing a crucial role in developing therapies with minimal side effects. The ongoing research at Chittagong University reflects its commitment to fostering innovative solutions in healthcare, positioning the university as a critical player in the global scientific community.

Research Article link: Synthesis, Antimicrobial, Molecular Docking Against Bacterial and Fungal Proteins and In Silico Studies of Glucopyranoside Derivatives as Potent Antimicrobial Agents - Islam - 2024 - Chemistry & Biodiversity - Wiley Online Library

Chem. Biodiversity 2024, 21, e202400932

Mini Reviews in Medicinal Chemistry, 2024, 24(11):1070 – 1088

Conserving Freshwater Fish Habitats Amidst Climate Change

Chittagong University's research underscores the urgent need for conservation policies to protect Bangladesh's threatened freshwater fish, which face habitat loss due to climate change and land use changes. Using the Bioclim species distribution model, the study reveals that while 75% of these species' habitats are currently climatically suitable, this will shrink to 13% in future scenarios, with 27 species at risk of losing all suitable habitats within their current ranges (**Figure 10**).

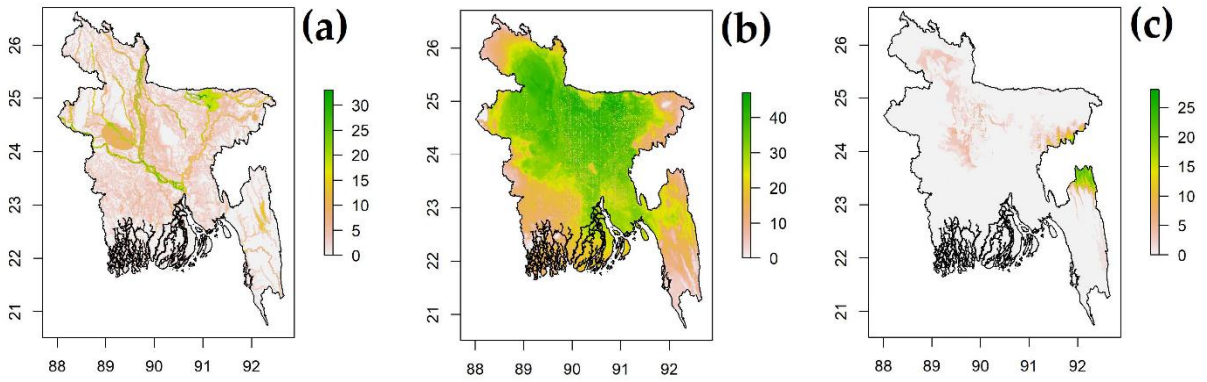

***Figure 10**. Map showing the variety of species, including (a) where they are currently found, (b) the areas that are suitable for them now, and (c) the areas that will be suitable for them in the future, for threatened freshwater fish in Bangladesh.*

Bangladesh's floodplains, rivers, and natural lakes offer limited future habitat: only 34% of species may find refuge in floodplains, 23% in rivers, and 16% in lakes. The research highlights floodplains' critical role in maintaining habitat connectivity and brood fish dispersal but also warns of unregulated fish harvests as a hidden threat to population stability. This study calls for prioritized management of these water networks, legal protection for vulnerable species, and dedicated protected areas, offering essential guidance for climate-resilient conservation policy and aligning with SDG 3 to support sustainable ecosystems and community well-being.

Research Article link: Conservation Priorities for Threatened Fish to Withstand Climate Crisis: Sustainable Capture and Protection of Inland Hydrographic Ecosystems
Ecologies 2024, 5(2), 155-169

Promoting Mental Health through Chittagong University Laughter Club

Chittagong University Laughter Club fosters psychological well-being and uplifting mood through regular laughter exercises. Recognizing the importance of mental health, the club aims to create a supportive environment for students and faculty to engage in activities that reduce stress and promote positivity. In line with its mission, the club has organized two impactful workshops focused on mental health skill-building.

In May 2024, the club hosted a Basic Counselling Skills Training led by Dr. Md. Shahinoor Rahman, Associate Professor of Psychology at Chittagong University, and Toffa Hakim, a Clinical Psychologist and CEO of Serenity. This workshop equipped participants with fundamental counseling techniques, allowing them to better understand and support the mental health needs within their community.

Earlier in the year, the club also organized a Cognitive Behavioral Therapy (CBT) Training in February, focusing on evidence-based techniques to manage stress, anxiety, and other psychological challenges (
Figure 11). These workshops reflect the Laughter Club's commitment to empowering individuals with practical mental health tools and contributing to a more resilient, positive campus community. Through these initiatives, the Chittagong University Laughter Club enhances personal well-being and promotes a culture of mental health awareness and proactive care on campus.

***Figure 11**. Participants in Cognitive Behaviour Therapy Training with the trainers.*

Impact of Shipbreaking Industry on Soil and Food Safety in Chittagong

In a comprehensive study on the environmental impact of shipbreaking activities around Chittagong, Dr Md. Nazrul Islam, Professor of **Applied Chemistry and Chemical Engineering** at the University of Chittagong, highlighted significant soil, rice, and vegetable contamination levels. The analysis revealed high concentrations of toxic metals such as lead (Pb), cadmium (Cd), arsenic (As), and several other harmful elements in food crops near shipbreaking yards. The study examined samples from various zones, including areas near shipbreaking sites and agricultural lands supplying food to the local population. Elevated contamination levels pose notable health risks, especially in frequently consumed vegetables like spinach and gourd, and underline the urgency of addressing pollution from these industrial activities.

The study also underscored how contamination varied by season, with higher bioconcentration factors detected in the dry season. By sampling during both wet and dry seasons, the research team could observe the seasonal influence on pollutant spread, providing valuable insights into the fluctuating risks to local food safety. Comparing results from areas near shipbreaking yards with control sites showed that the nearby operations are a primary pollution source, with toxic elements traveling into food crops and affecting residential and agricultural zones.

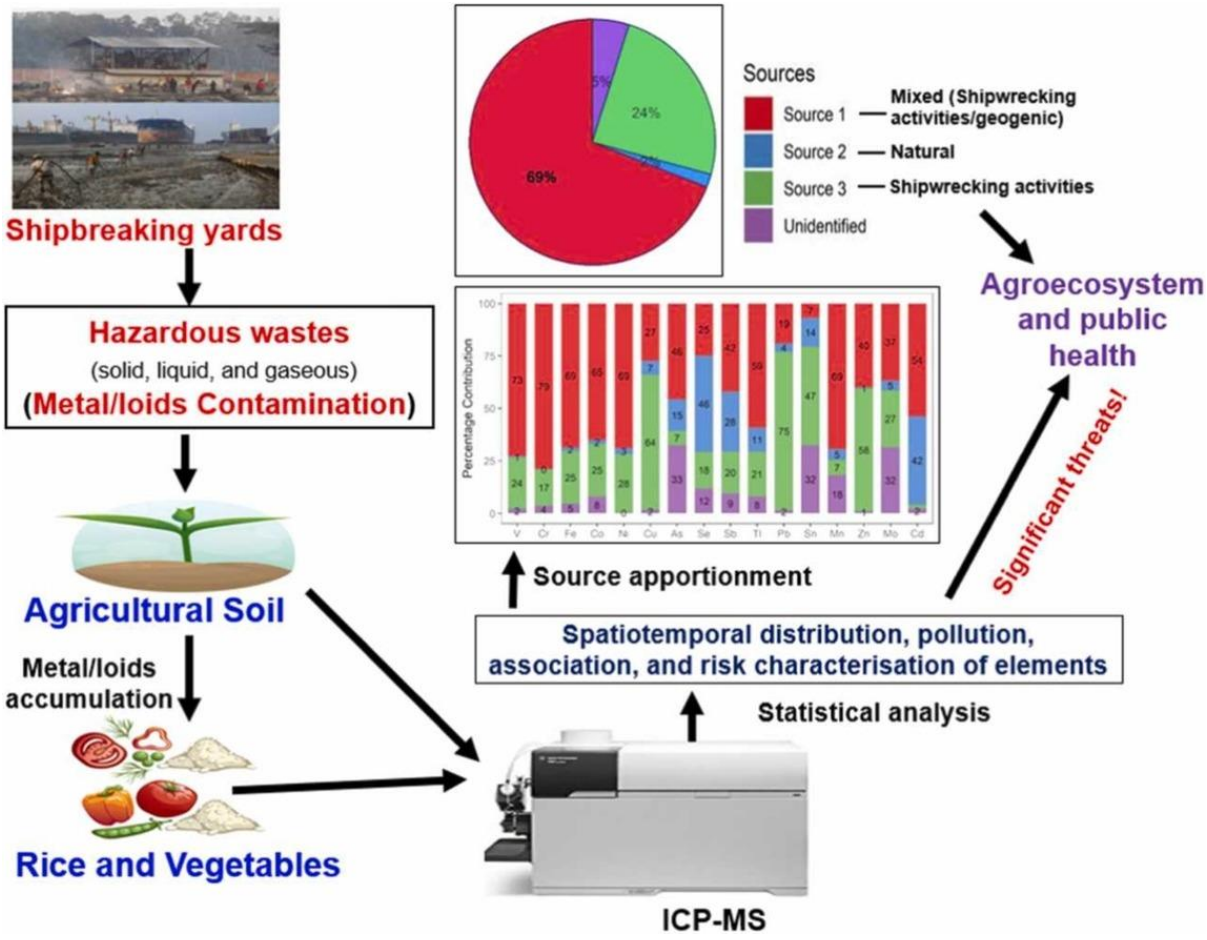

Figure 12. The methodology used to identify the risk of heavy meat pollution to the food chain in Chittagong.

This pioneering study, led by Dr. Islam, marks an important step toward documenting and mitigating the environmental and health impacts of shipbreaking on Chittagong's local communities. It is part of Chittagong University's ongoing commitment to environmental research that benefits regional safety, public health, and awareness about sustainable industrial practices.
Research article link: Uncovering the impact of mega-scale shipbreaking yards on soil and crop quality in Bangladesh: A spatiotemporal dynamics and associated health risks of metal/loid contamination - ScienceDirect

Ecological Factors and Future Projections of Snakebite Poisoning in Chattogram: A Call for Sustainable Management

Snakebite envenoming remains a critical health issue in Bangladesh, with an estimated 700,000 incidents occurring annually, according to a 2009 community-based survey. Despite the significant health burden, there has been limited research into the ecological aspects of snakebite occurrences, particularly how environmental and population factors influence snakebite incidence. To address this gap, Chowdhury et al. from the Department of Zoology conducted a comprehensive study that analyzed a 16-year clinical-epidemiological dataset of snakebite patients in the Chattogram Division, focusing on the ecological variables that contribute to snakebite risk.

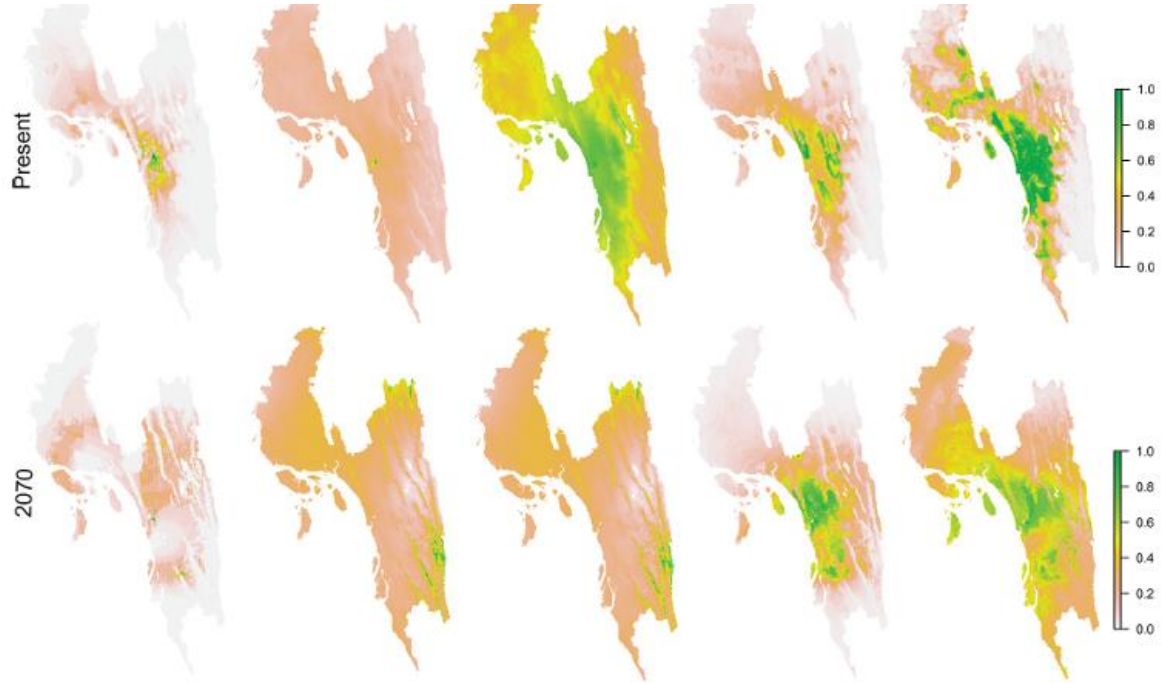

Figure 13. The map presents the predicted areas of snakebite occurrence in the Chattogram Division, based on five different models.

The study mapped areas prone to snakebites by utilizing five species distribution models, revealing significant variations in snakebite incidence across the region (

Figure 13). The findings indicate that approximately 200,000 snakebites occur annually in Chattogram, a figure significantly higher than the 2009 estimate of fewer than half. The predictions for 2070, despite projected global temperature increases, suggest that the incidence of snakebites will remain high, highlighting the persistent health threat posed by snakebites in this region over the next 50 years.

Given the ongoing risks, the study advocates for developing a sustainable management plan that addresses human-snake conflicts and ensures the conservation of snakes and the ecosystem services they provide, especially in agriculture. This research underscores the importance of integrating ecological factors into public health strategies to mitigate the impact of snakebites while preserving biodiversity and promoting sustainable environmental practices.

Research Article Link: Combining species distribution models and big datasets may provide finer assessments of snakebite impacts | PLOS Neglected Tropical Diseases

PLoS Neglected Tropical Diseases, *18*(5), e0012161.

CONTRIBUTION TO HEALTH RESEARCH

Current collaborations with health institutions

Our researchers at the University of Chittagong maintained a good research network within Bangladesh and globally. The current ongoing health research collaboration is reached with 21 institutes, including universities, medical colleges, diagnostic centres, and research institutes. These institutes span from a local diagnostic centre called Epic Healthcare Limited, Chattogram, to the Marshall Centre for Infectious Diseases, The University of Western Australia, founded by the Nobel laureate Professor Barry Marshall. The list of current collaborating institutions is given in **Table 1**.

Table 1. The list of current collaborating institutions.

Sl	Name	Category
1	Epic Healthcare Limited	Diagnostic centre
2	Chevron Diagnostics Limited	Diagnostic centre
3	BIRDEM	Hospital
4	Chittagong Diabetes Hospital	Hospital
5	Bangladesh Institute of Tropical and Infectious Diseases	Hospital
6	250 bedded General Hospital, Chattogram	Hospital
7	Dhaka Medical College	Medical College
8	Chattogram Maa-O-Shishu Hospital	Medical College
9	Sir Salimullah Medical College, Dhaka	Medical College
10	Mymensingh Medical College	Medical College
11	Rangamati Medical College	Medical College
12	ICDDR, B	Research Institute
13	Child Health Research Foundation (CHRF), Bangladesh	Research Institute
14	Chittagong Research Institute for Children Surgery (CRICS)	Research Institute
15	Nishpap Autism Institute	Research Institute
16	Institute of Epidemiology Disease Control And Research (IEDCR), Bangladesh	Research Institute
17	Kanazawa University Medical Centre, Japan	University

Sl	Name	Category
18	McGill University Health Centre (RI-MUHC), Canada	University
19	The Milken Institute School of Public Health, The George Washington University, USA	University
20	Marshall Centre for Infectious Diseases, The University of Western Australia	University
21	James P Grant School of Public Health, BRAC University	University
22	Rahman Group, Institute of Pharmaceutical Science, King's College London	Research Group

HEALTH OUTREACH PROGRAMMES

Shared sports facilities

For student residences, the University of Chittagong has 5 different playgrounds for boys and a shared central field for boys and girls. But to promote physical exercise and sports to help students and staff maintain sound well-being during their days at the university we have a dedicated indoor sports centre at the Gymnasium complex where any student group can play indoor games like basketball, Tennis, badminton, Karate etc. Apart from that, there is a shared gym inside the gymnasium (**Figure 14**, **Figure 15**, **Figure 16**). Apart from that, all the university-managed residential units have indoor sports facilities for resident students.

***Figure 14**. Central Gymnasium complex, University of Chittagong.*

Figure 15. Indoor sports facility at Gymnasium complex.

Figure 16. Shared gym facility of Chittagong University.

FREE SEXUAL HEALTH CARE AND MENTAL HEALTH SUPPORT

The **University Medical Centre**, the **Psychology Department**, and the Chittagong University administration jointly organize counselling sessions. The anti-harassment committee, the Student Advisor office and the proctorial body of the university are also providing guidance and counselling to the students seeking advice.

SMOKING-FREE CAMPUS PREMISES

In alignment with the Bangladesh government's anti-smoking policy, the University of Chittagong has designated all departments, faculties, and offices as smoke-free zones.

CONCLUSION

In conclusion, Chittagong University has significantly contributed to SDG 3 by integrating health and well-being into its academic and research activities. Through impactful studies and collaborations, the university has raised awareness, fostered knowledge, and driven initiatives aimed at tackling health challenges in the local and national context. The university's efforts in biological safety, disease prevention, and environmental sustainability demonstrate its unwavering commitment to the well-being of both individuals and communities. As the university continues to align its research and actions with national policies, it will undoubtedly play a pivotal role in shaping a healthier and more sustainable future for Bangladesh.