



Editorial *Special Edition on Galamsey*

Welcome message from the Editor-in-chief

Professor Andrew Anthony Adjei
Email: hsijournal@ug.edu.gh



I welcome readers to this Special Edition on galamsey. Galamsey, a local Ghanaian term is an amalgamation of “gather” and “sell” and encapsulates the informal illegal artisanal mining activities to extract gold, diamonds and precious minerals. Galamsey mining causes significant environmental destruction, rendering the soil infertile, polluting water bodies, and degrading the ecosystem. Galamsey is an urgent national crisis that demands immediate and collective action for resolution. Ghana is fighting against galamsey, and the Health Sciences Investigations (HSI) Journal supports this national effort.

The HSI Journal is pleased to present this Special Edition on Galamsey, featuring five selected original articles, a short communication from the Ghana Academy of Arts and Sciences, a medical case report that highlights the grim consequences of galamsey.

Galamsey, once a whisper now reverberates across our nation and has ravaging effects not only in the present but also for the future. Localized in certain regions in the past, it is beginning to rapidly spread its tentacles across the nation. In our capacity as stewards of the health sciences, we must lift the veil on this illicit affair, dissecting its impact on health and our ecosystems. This editorial calls for a multifaceted response to address galamsey's detrimental effects on the health and well-being of Ghanaians. Galamsey is not merely an economic or environmental issue; it is a public health crisis that necessitates immediate attention. The primary culprit in galamsey's health impact is mercury. When mercury and gold interact, they bind in a process called amalgamation.

This method is used to extract gold from ore. Mercury is toxic and has documented effects on the human body. Mercury can be absorbed by touch, inhalation, or consumption. Chronic exposure to mercury can affect the kidneys, lungs, digestive system the nervous systems and other parts of the human body. It is a threat to the development of the child in utero and early life. As miners separate the gold from the mercury, the waste containing mercury seeps into the environment and contaminates our waterbodies and soil. This is how mercury becomes a part of our food chain. It is known to affect aquatic life and can be found in fish. Galamsey disrupts the delicate balance of ecosystems. The devastation of forests and the pollution of rivers not only jeopardize biodiversity but also disrupt the traditional livelihoods of communities. This can result in malnutrition and food insecurity, which can further compromise health. Additionally, the unsafe working conditions in galamsey mines expose miners to accidents often fatal and respiratory illnesses due to dust inhalation

The complex fundamental causes of galamsey make it a long-term challenge to combat. Some individuals are motivated to pursue this perilous source of income through illegal mining due to poverty and unemployment. The issue is further exacerbated by corruption and weak enforcement of regulations within the mining sector. Additionally, the lucrative market for illegally mined resources is driven by the global demand for gold. The health science community has a crucial role to play in addressing galamsey. In the long term, fostering collaboration between health professionals, environmental scientists, marine and fisheries scientists, public health scientists, agricultural scientists, community stakeholders, journalists, security agencies and policymakers is vital. It is essential to aggressively intensify public awareness campaigns in order to inform communities about the health hazards associated with galamsey and to motivate them to report illegal mining activities.

Comprehensive research is essential to ascertain the extent of the long-term health effects of mercury exposure on exposed populations and to assess the impact of this harm on our waterbodies, soil, biodiversity, and food chain. This information has the potential to influence public health interventions and policy decisions. It is imperative to conduct health screenings in afflicted regions and to ensure that healthcare services are easily accessible. Furthermore, a step toward a healthier future is the exploration of alternative, sustainable mining practices that reduce environmental and health hazards. The lands must also be reclaimed through a concerted action by stakeholders through reforestation, soil rehabilitation, water purification activities. It is equally necessary to invest in education and offer alternative economic opportunities to those who are drawn to galamsey. Technology can also play a vital role in monitoring mining activity and identifying galamsey hotspots. It is imperative to address corruption and strengthen law enforcement.

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As the sun rises over the scarred lands in Ghana, it reveals a harrowing drab picture – a dance of environmental betrayal, greed, and desperation. A trail of mercury-laden rivers that potentially infiltrates our food chain, deforested landscapes, destroyed flora, displaced fauna, and fractured communities is left in the wake of “Galamsey”. Let us recalibrate our moral compass. Our choices ripple beyond our borders, beyond our lifetimes and can have damaging consequences for our descendants. Galamsey is not just a menace; it is a mirror reflecting our values, our priorities. The canvas awaits our stroke. Will we paint a story of redemption or regret?

The battle to end galamsey is ongoing and victory is imperative. It is essential that every stakeholder recognizes the importance of this issue. A united front and consistent collaboration are crucial, as is leveraging all available resources to ensure the success of this endeavor.

The HSI Journal extends sincere gratitude to the Editorial Board members and reviewers for their invaluable contributions and suggestions in making this special publication possible. We also acknowledge the immense support and guidance provided by the Technical Team, Advisory Board, all authors, and publishers.

As Editor-in-Chief, I encourage authors and readers to share their feedback, suggestions, and concerns to help us maintain the HSI Journal's high standards of excellence.

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About the Editor-in-chief

Professor Andrew Anthony Adjei is a Professor of Immunology with over thirty years of biomedical and allied health sciences training and research experience. He is a Fellow of the following: Ghana Academy of Arts and Sciences (FGA), African Academy of Sciences (AAS), Ghana Association of Medical Laboratory Scientists (GAMLS) and African Sciences Institute (ASI). Professor Adjei has been Head of Department, University of Ghana (UG) School of Biomedical and Allied Health Sciences, Deputy Provost, College of Health Sciences (CHS), Director of Research, Innovation and Development (UG), Acting Director, Institutional Research and Planning Office (UG), Coordinator of Research, University of Ghana Medical School (UGMS), Editor-in-Chief, Ghana Journal of Allied Health Sciences, President of Ghana Association of Medical Laboratory Scientists, Project Coordinator, Transdisciplinary Training for Resource Efficiency and Climate Change Adaptation in Africa, Project Coordinator, Building Stronger Universities (Partnership between UG and Universities in Denmark), Project Coordinator, Fogarty Global Health Fellows Training Programme (Partnership between UGMS and University of Morehouse School of Medicine, Atlanta, Georgia, USA), and Project Coordinator, Minority in Health Research Training (Partnership between UGMS and University of Morehouse School of Medicine). Professor Adjei was the immediate past Coordinator of the Worldwide Universities Network and the Australia-Africa Universities Network. Currently, he is the Chairman of the following: Ethics and Protocol Review Committee, CHS Public Lecture Series and Scientific Conference Planning Committee, CHS Newsletter (In Focus), CHS Library Refurbishment Committee, Member of Korle Bu Teaching Hospital Institutional Review Board and the Coordinator, MPhil Programme in Immunology, at the Department of Pathology, UGMS. Professor Adjei is a reviewer of several clinical and biomedical Journals globally. He has served on various UGMS and UG committees and currently serves on both the UG and CHS Academic Boards.

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