INTRODUCTION

We are members of the IUGS (International Union of Geological Sciences).

The International Union of Geological Sciences (IUGS) is one of the world's largest scientific organizations. It encourages international cooperation and participation in the Earth sciences for the benefit of human well-being.

https://www.iugs.org/organization/affiliated-organizations

The International Medical Geology Association aims to provide a network and a forum to bring together the expertise of geologists, Earth scientists, environmental scientists, toxicologists, epidemiologists, and medical specialists in order to characterize the properties of geological processes and agents, the dispersal of geological materials, and their effects on human populations.

Our primary objective is to raise awareness among scientists, medical specialists, and the general public regarding the importance of geological factors for health and well-being. It was recognized that limited cooperation and communication among these groups hindered the ability of scientists and public health professionals to address a range of complex environmental health issues.

IMGA Chapters are regional groups that bring together individuals from a specific area or organization who are interested in medical geology. Currently, there are 29 IMGA Chapters worldwide, with members in more than 50 countries.

Medical geology is an emerging (or re-emerging) discipline that, broadly speaking, examines the impacts of geological materials and processes on public health. It is a dynamic discipline that unites the geosciences, biomedicine, and public health communities to address a wide range of environmental health issues.

Medical geology professionals have five main objectives:

01- Identify geochemical anomalies in soils, sediments, and water that could negatively impact human and animal health.

02- Identify the environmental causes of known health problems and, in collaboration with biomedical and public health researchers, seek solutions to prevent or minimize these issues.

03- Evaluate the beneficial health effects of geological materials and processes.

04- Reassure the public when there are unfounded environmental health concerns associated with geological materials or processes.

05- Forge links between developed and developing countries to find solutions for environmental health issues.

Key environmental health issues requiring collaboration between geologists and the medical community include: exposure to natural dust and radioactivity; exposure to toxic levels of essential and non-essential trace elements, such as arsenic and mercury; nutritional trace element deficiencies; naturally occurring toxic organic and inorganic compounds in drinking water; and the identification and effects of volcanic emissions, among others.

Geoscientists have also developed a range of tools and databases that can be used by the environmental health community to study vector-borne diseases and model the dispersion of pollutants in surface water, groundwater, and air, and which can be applied to occupational health issues resulting from mineral exposure.

Brazil Chapter

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