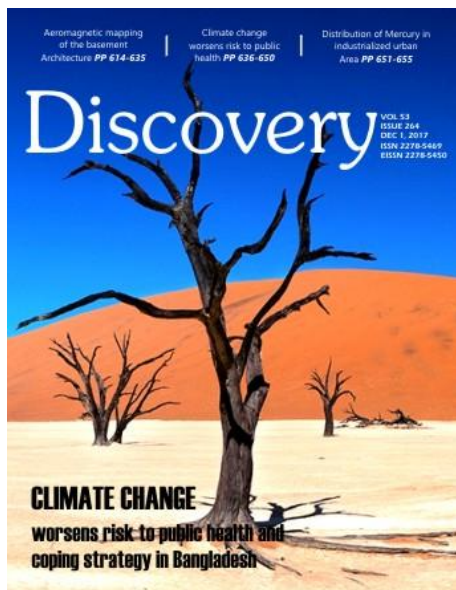


Discovery

About the Cover



ABOUT THE COVER

Global climate change is now a reality and Bangladesh is widely recognized to be one of the most climate vulnerable countries in the world. Among the many challenges faced by the coastal communities, the effects of climate change are discernibly threatening, impacting on human settlement, agricultural production, economic development, and human health in the Chawra Union of Barguna district. The study mainly focuses on assessing current knowledge base and understanding on public health impacts due to climate change and also to explore the different strategies/measures people employ to cope with climate sensitive diseases and sickness. A cross-sectional study was conducted among 70 households from Chawra union elected through multi-stage sampling techniques, using a semi-structured questionnaire supplemented by focus group discussions and key informant interviews. The study found that climatic changing parameter (temperature, rainfall) is increasing during 1991-2015 rapidly. A number of diseases like normal colds/coughs/fevers, dysentery, headaches, diarrhea, skin diseases, psychological disorders, malnutrition related diseases, pneumonia, measles, heatstroke, malaria, etc., is exacerbating by extreme climate events in the study area. The study also found that respondents applied different types of primary health coping strategies to prevent climate related diseases and sickness. To cope with health problems, 57.14 % used personal treatment experiences and 28.57 sought any treatments available at village level. The percentage of respondents that visited unqualified health providers to cope with climate induced health problems was quite high. Collection of such knowledge on climate related health coping strategies can allow researchers to study any specific issue on health coping, and policy makers to initiate effective climate related health coping strategies for climate vulnerable people (Ref: Irteja Hasan, Tapos Kormoker, Tazmul Ahasan Azad, Ali Adnan, Shafiqul Islam. Climate change worsens risk to public health and coping strategy in Bangladesh. *Discovery*, 2017, 53(264), 636-650).

ANALYSIS

Aeromagnetic mapping of the basement architecture of the Ibadan region, South-Western Nigeria

Cyril Chibueze Okpoli, Victor Ekere

Potential-field data of Ibadan sheet was processed to interpret the subsurface geology and estimate the depth to basement sources in order to evaluate and deduce structural lineaments, basement configuration trends. Aeromagnetic data were acquired, filtered, inverted, and enhanced using appropriate software packages to generate a model of the subsurface topography. The Butterworth magnetic intensity ranges from -17.297 to 128.757 nT; Reduction to the Pole varies from -81.242-202.554nT; Derivatives ranges from -0.092 to +0.079 and -0.082 to +0.088 respectively, upward continuation at 100m and 1.8km ranges from -17.453 to +128.587 and 17.076 to +108.696 nT and analytical signal varies from -27.647 to + 187.416 nT. The average radial power analysis delineated the deeper magnetic source 0 to 1 km with low magnetic intensity ranging from -27.647 nT to +29.527 nT and deeper sources ranging 1km - 5 km with anomaly of high magnetic intensity values varying from 116.113 nT to +187.416 nT. The Wenner deconvolution depth to basement profile of 97m to 9.797km ranges between 20m and 472m while Euler deconvolution ranges from 1263m to 5918m. The magnetic intensity distributions depend on the size, depth of burial, and the thickness of low susceptibility superficial material overlying the magnetite rich crystalline rocks.

Discovery, 2017, 53(264), 614-635

RESEARCH

Climate change worsens risk to public health and coping strategy in Bangladesh

Irteja Hasan, Tapos Kormoker, Tazmul Ahasan Azad, Ali Adnan, Shafiqul Islam

Global climate change is now a reality and Bangladesh is widely recognized to be one of the most climate vulnerable countries in the world. Among the many challenges faced by the coastal communities, the effects of climate change are discernibly threatening, impacting on human settlement, agricultural production, economic development, and human health in the Chawra Union of Barguna district. The study mainly focuses on assessing current knowledge base and understanding on public health impacts due to climate change and also to explore the different strategies/measures people employ to cope with climate sensitive diseases and sickness. A cross-sectional study was conducted among 70 households from Chawra union elected through multi-stage sampling techniques, using a semi-structured questionnaire supplemented by focus group discussions and key informant interviews. The study found that climatic changing parameter (temperature, rainfall) is increasing during 1991-2015 rapidly. A number of diseases like normal colds/coughs/fevers, dysentery, headaches, diarrhea, skin diseases, psychological disorders, malnutrition related diseases, pneumonia, measles, heatstroke, malaria, etc., is exacerbating by extreme climate events in the study area. The study also found that respondents applied different types of primary health coping strategies to prevent climate related diseases and sickness. To cope with health problems, 57.14 % used personal treatment experiences and 28.57 sought any treatments available at village level. The percentage of respondents that visited unqualified health providers to cope with climate induced health problems was quite high, Collection of such knowledge on climate related health coping strategies can allow researchers to study any specific issue on health coping, and policy makers to initiate effective climate related health coping strategies for climate vulnerable people.

Discovery, 2017, 53(264), 636-650

ANALYSIS

Distribution of Mercury in industrialized urban area and bottom sediments in India

Divya Tyagi

The aim of this study was to determine distribution of mercury in bottom sediments and soil from different locations. Total mercury concentrations have been determined in bottom sediment (ponds, lakes, streams and rivers) and soil samples collected and analyze. Total mercury concentration in the bottom sediments was 97 ± 70 ng/g dry weight (range 29-283). Average total mercury concentration in the soil from urban areas was 146 ± 130 ng/g dry weight (range 17-746). The results of the study have shown that mercury distribution in the samples of water and bottom sediments, collected from various sites varies over a relatively large range. The mean concentration of Hg in surface soils was significantly greater than background concentrations. Forty-eight percent of the samples exceeded the "critical" concentration of 1.0 mg Hg/kg, dry weight in soils, which has been established by the Chinese government. At depths of 0–80 cm in the soil, profile concentrations of Hg also exceeded the background value.

Discovery, 2017, 53(264), 651-655