

EDITORIAL

Scientific literacy in the age of misinformation

Many of the important issues that confront society today such as, mitigating climate change, alternative energy sources, genetically modified organisms and the use of pesticides and weedicides in agriculture, require the general public to possess scientific literacy to understand and decide amongst different proposals presented by policy makers and politicians. However, it is clear that in today's world, scientific literacy which is limited only to a knowledge of some basic theories and facts regarding the natural world does not enable society to take reasonable decisions on these issues.

This is mainly due to the fact that the controls that existed in the flow of scientific information, such as boards of scientific and academic organizations, editors and knowledgeable science journalists are now being by-passed via social media and the internet. Various ideological and political campaigns are now behind much of what passes as "science". Fidelity to the truth is no longer a concern. The anti-vaccine drive in many technologically advanced countries during the Covid-19 pandemic, and the banning of chemical fertilizers

in Sri Lanka in 2021 stand as illustrative examples. An unfortunate by-product of the digital revolution has been the current age of misinformation.

While the implications of these developments for democracy and freedom of expression are being debated, it is evident that being a scientifically literate person implies the ability to evaluate the trustworthiness of science related information that is so readily available on the internet. The different fields of science are so highly specialized today, that it may not be possible even for a scientist to evaluate the evidence for a particular claim outside one's own specialty with certainty. Thus, the starting point for both scientists and the general public has to be to assess the trustworthiness of their sources of information. This may not be as straightforward as it seems, but the kinds of questions that should be looked into are conflict of interest, ideological bias, credentials for expertise and level of agreement with other experts in the field. Being able to evaluate 'who' is making a claim becomes as important as considering 'what' is being claimed.

Ajit Abeysekera