



**INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS
UNION GEODESIQUE ET GEOPHYSIQUE INTERNATIONALE**

STATEMENT

ON FREEDOM TO CONDUCT SCIENCE AND RESPONSIBILITIES OF SCIENTISTS

Adopted by the IUGG Bureau on 28 June 2010

The International Union of Geodesy and Geophysics (IUGG) and all of its component bodies adhere to the Principle of the Universality of Science of the International Council for Science (ICSU), which is fundamental to scientific progress. This principle encompasses freedom in relation to (i) expressions of scientific ideas, hypotheses and forecasts, (ii) conduct of research using data, information, experiments and theories, and (iii) communicating scientific results to the public through open publications and scientific conferences. These freedoms are highly valued by the scientific community and generally accepted by governments and policy makers. However, this is not always the case.

For example, recently the L'Aquila (Italy) Prosecutor's office indicted the members of the Abruzzi region's High Risk Committee for unintended murder in L'Aquila¹. The indictment is based on the failure of the Committee to warn the population before the strong earthquake of 6 April 2009 that killed about 300 people. It is shocking and unacceptable to accuse and legally indict scientists and members of a governmental panel because they failed to make a prediction of an extreme natural event in a particular place. No scientist (or official person giving statements based on scientific opinions) should be prosecuted for having expressed a scientific opinion based on the available knowledge, which is always limited. Meanwhile societal stakeholders can use even limited scientific knowledge to benefit society. IUGG condemns unacceptable political and judicial interference into scientific issues.

This case shows how society can misuse science for political or other purposes and reflects the urgent necessity of the Earth science community to improve communication with policy makers and the public to explain the limitations of the present scientific knowledge of the Earth and its environment and the limitations on the predictability of extreme natural hazards.

The ICSU Principle of the Universality of Science focuses on scientific rights and freedoms but also emphasizes a number of responsibilities. Scientists have an individual responsibility to conduct their work with honesty, integrity, openness and respect, and a collective responsibility to maximize the benefit and minimize the misuse of science for society as a whole. The primary obligation of scientists is to conduct research, to discover new phenomena, to develop new knowledge, and based on the new knowledge to improve their forecasting capability so as to benefit society. A secondary, but important, obligation is to inform public and societal stakeholders on scientific findings within a reasonable time.

¹ Caporale, G., Sottovalutarono il pericolo-terremoto. La Repubblica, 4 June 2010.

DeWind, A., Italian seismologists on shaky ground. Geoscientist online, 15 June 2010.

Nosengo, N., Italy puts seismology in the dock. Nature, 465, p. 992, 24 June 2010.