

EUROPEAN FEDERATION OF GEOLOGISTS
“CONSIGLIO NAZIONALE DEI GEOLOGI D’ITALIA”
(ITALIAN NATIONAL COUNCIL OF GEOLOGISTS)

INTERNATIONAL GEOHAZARDS CONFERENCE
FINAL RESOLUTION

The European Geologists, convened in Rome on 25 May 2007 for the International Geohazards Conference organised by the European Federation of Geologists and by the Consiglio Nazionale dei Geologi Italiani (Italian National Council of Geologists),

Considering the recent IPCC Report on Climate Change, which estimates an increasing trend of the Earth’s temperature of 1.5 to 6°C and identifies a very likely value of +3°C by 2100, with the consequent melting of alpine glaciers and of polar ices and a sea level rise of 0.5 to 7 m (the minimum value being due to thermal expansion of the oceans only, without considering the melting of polar ices),

Acknowledging that the combustion of massive amounts of fossil fuels has raised the atmospheric concentrations of CO₂ to values comparable to those in the Pliocene age, bringing back, by about 4 million years, the process of transfer of atmospheric CO₂ to geological formations in the form of hydrocarbons,

Recognising that the growing number of hydrogeological disasters associated with more intense rainfalls, even in countries which have so far been spared (e.g. Sardinia recently recorded 500 mm of rainfall in a single day, a value comparable to the precipitation of a whole year), and that the increase in drought periods at given latitudes **require the adoption of adjustment strategies at worldwide and local level**, because even an immediate and unlikely reduction in greenhouse gas emissions will not stop ongoing processes, whose impact will last for at least 60 years,

Considering that future environmental scenarios have already been formulated for Europe and that such scenarios involve heavy economic and social consequences, such as:

- a) progressive deglaciation in the alpine chain,

- b) processes of landsliding, erosion and desertification associated with long periods of drought and higher frequency of extreme weather and climate events,
- c) shortage of water for hydropower generation, irrigation and, to a lesser extent, for drinking uses in some periods of the year,
- d) reduced recharge of groundwater,
- e) coastline change due to coastal erosion,
- f) increase of saline intrusion into coastal groundwater,

Considering that the growing land use for urban infrastructure and development exposes the populations of European countries to higher geological hazards, such as landslides, earthquakes, floods, volcanism, subsidence, coastal erosion, and desertification,

Considering that renewable and non-renewable geo-natural resources, such as water, soil, fossil fuels and minerals, are increasingly deteriorating owing to pollution and consumption patterns resulting from unsustainable resource management models,

Considering that the models for managing land and related risks, as well as the models for managing geo-resources are all conceptually biased, as they rely on a static perception of land and of the geological environment; in other terms, they lack the dynamic component, which is the main cause of earthquakes, landslides, subsidence, floods and, partially, of climate change,

Considering that geologists have the scientific and cultural tools to correctly understand and predict the above mentioned dynamic phenomena, as well as to build the related geological evolutionary models,

Considering that these geological evolutionary models should underpin the processes of urban, land and environmental planning, of correct prediction and prevention of geological hazards, of sustainable use of geo-resources (water, soil, fossil fuels, geothermal energy and minerals), as well as the related land management models,

Considering also that, with regard to protection of populations from geo-natural hazards and to sustainable use of natural resources, there is a lack of a comprehensive

and consistent regulatory framework within the EU and that, in such framework, geological modelling should have the purpose of formulating predictive scenarios of land dynamics and precede the stages of urban, land and environmental planning, design of civil engineering works, management of natural resources, planning and mitigation of natural risks,

Invite

- **the European Parliament, through its President Hans-Gert Pöttering,**
 - **the Council of Europe, through its President Angela Merkel,**
 - **the European Commission, through its President José Manuel Barroso and Environment Commissioner Stavros Dimas,**
1. to issue unitary and integrated legislative instruments; such instruments should not only reduce emissions and promote sustainable development, **but also and above all recognise that prevention and management of geological-environmental hazards, correct management of resources and land planning, all based on knowledge of the Earth's dynamics and on its geological modelling, are the key instruments of land management;**
 2. to extend the European Directive on floods, recently adopted by European Parliament in April 2007 and by European Council 18 September 2007; **the Directive should also involve the prevention and management of all natural hazards (landslides, earthquakes, floods, drought, erosion, subsidence, etc.), the correct management of all geo-resources (water, soil, fossil fuels, geothermal energy minerals), as well as scientific based processes of urban, land and environmental planning aimed at controlling anthropogenic pressures on vulnerability and resilience of geological systems;**
 3. **to initiate a process of permanent consultation with European geologists,** entrusting its coordination to the European Federation of Geologists and to European Geological Surveys;
 4. **to emphasise the professional capability of European geologists,** recognising that knowledge of land and of its evolution calls for specific know-

how and skills and that this profession is of relevant public interest, as geologists have the needed scientific skills and therefore are capable of safeguarding land and communities;

5. **consequently, to promote the recognition of the title of professional Geologist**, by entering into an agreement with all European universities; such agreement should provide for homogeneous education and training requirements and give guidelines for Continuous Professional Development, with a view to fostering the practice and dissemination of the profession to the benefit of public and private communities and the free movement of geologists in the countries of the European Union.

Approved in Rome – Tempio di Adriano, 25 May 2007

THE EUROPEAN FEDERATION OF GEOLOGISTS

The President

Istvan Berczi

THE CONSIGLIO NAZIONALE DEI GEOLOGI ITALIANI

The President

Pietro Antonio De Paola