



FÉDÉRATION EUROPÉENNE DES GÉOLOGUES
EUROPEAN FEDERATION OF GEOLOGISTS
FEDERACIÓN EUROPEA DE GEÓLOGOS

GEOLOGY FOR THE CITIZENS OF EUROPE

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President of the European Federation of Geologists



GEOSCIENCE: THE FOUNDATION OF OUR FUTURE



Who are we?

- **The European Federation of Geologist (FEG)**
 - The representatives of the geological profession in Europe.
 - The European Federation of Geologists (“EFG”) was first established in **1980** by the representatives of the national associations of geologists from Belgium, France, Italy, Portugal, Spain and the United Kingdom.
 - The nations at present represented in the Federation as Full Members are: Belgium & Luxembourg, Croatia, Cyprus, Czech Republic, Finland, France, Germany, Greece, Hungary, Ireland, Italy, The Netherlands, Portugal, **the Russian Federation**, Serbia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.
 - In addition to these Full Members, Bulgaria, Denmark, Slovakia, Iceland, Poland, Norway, Romania, Turkey and Canada are present as Observer Members, while the USA association is an Associate Member.
 - The combined geological membership of these associations is approximately 40.000, but the total represented geologist are around 140.000 geologists (28% of the world total estimated in 500 000)



Our goals

- Represent the geological profession in Europe.
 - Affirm the professional identity of geologist in Europe
- Safeguard and promote the interests of the geological profession in Europe
 - Guarantee free movement of geologist in Europe. Mutual recognition of academic and professional qualifications.
 - Title of European Geologist: Professional quality
 - Promote harmonisation of education and training
 - Code of professional ethics
 - Advice, assistance and collaboration to and between member associations
- Promote a European Geological Policy
 - Responsible use of Earth Natural Resources: Energy, mineral, water
 - Geological problems in land planning, environmental protection and exploitation of raw materials. Geological Hazards. Geological Engineering.



Country	N° of practising geologists		Annual Movement of geologists		Unemployed geologists
	N° of members	Total n° of geologists (est.)	N° of Graduated) from University p.a.	N° of possible geological vacancies	
Austria	700	1000	100	100	0
Belgium/Luxembourg	100	600	30	34	5
Cyprus	168	162	10	76	0
Czech Republic	504	1000	55	60	0
Denmark	350	1200	100	100	0
Finland	817	1000	60	500	0
France	750	6000	400	300	100
Germany	2007	19200	500	500	0
Greece	1700	3600	250	100	200
Hungary	840	1500	40	35	42
Ireland	160	400	50	100	0
Italy	7000	10000	700	350	250
Netherlands	1000	5000	200	100	0
Poland	1195	2000	n.a.	n.a.	n.a.
Portugal	640	1400	100	30	10
Russian Federation	271	50000	4000	5000	0
Serbia	269	350	30	20	36
Slovakia	279	800	n.a.	n.a.	n.a.
Spain	3196	5000	500	550	96
Switzerland	400	2000	50	50	0
Sweden	830	900	120	200	0
Turkey	6580	10000	n.a.	n.a.	n.a.
United Kingdom	9365	15000	1000	1000	0
TOTAL	39121	138112	>8295	>9205	>739



- Trends:
 - Unemployment rate of geoscientist lowest ever: salaries on the rise
 - Increasing demand for most posts particularly environmental, engineering geology, hydrogeology and mineral resources including oil.
 - Collapse of demand in northern european countries in 2-3 years due to low graduated production and high demand?

CHALLENGES FOR GEOSCIENCIES



- Locating and quantifying resources
- Predicting and mitigating hazards
- Supporting safe and sustainable development
- Evaluating the impacts of climate change

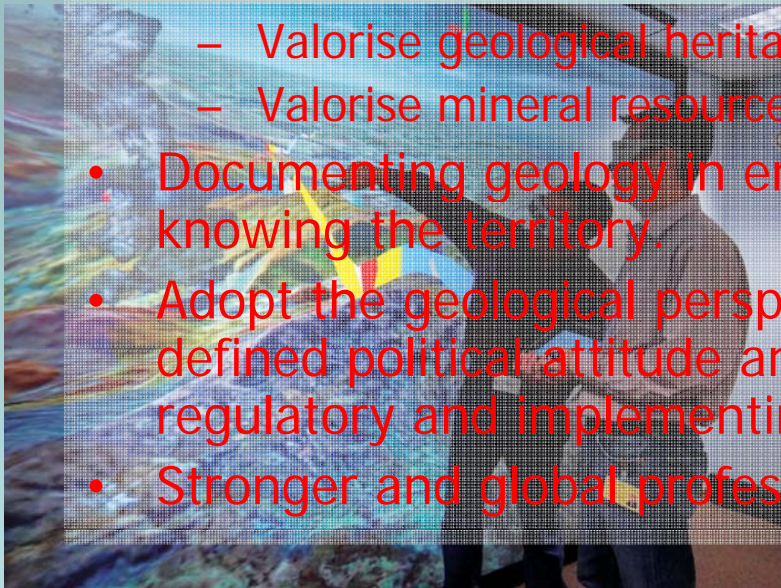
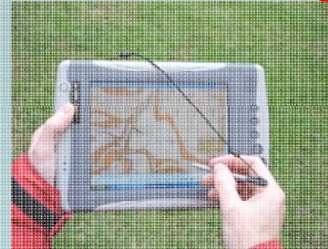
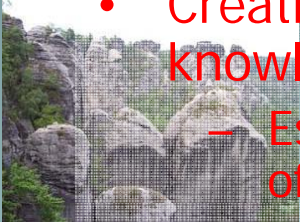


GEOSCIENCES IN HUMAN NEEDS

Basic Need	Geoscientific discipline	Activity
FOOD	Agro geology	Improvement of soil fertility through direct application of rocks and minerals
WATER	Hydrogeology Engineering Geology	Groundwater exploration and management; water harvesting, groundwater exploitation
SHELTER & HABITATION	Hydrogeology Engineering Geology	Location and use of rocks materials for buildings, slope stability studies, urban planning, waste disposal
COMMUNITY HEALTH	Environmental geochemistry Environmental Geology Medical Geology	Groundwater contamination, environmental pollution, rock and soil geochemistry, sickness
ENERGY	Petroleum, Gas & Coal Geology Geothermal energy	Search for oil, coal, gas, peat and geothermal resources, their evaluation and exploitation
PROTECTION FROM HAZARDS	Engineering Geology Environmental Geology	Monitoring of unstable slopes, seismic and volcanic activity, dam site and reservoir geology investigations, environmental pollution, hazards mapping.
EMPLOYMENT/ SUSTAINABLE DEVELOPMENT	Engineering Geology Mining Geology	Evaluation and exploitation of mineral resources for industrialisation, new uses for industrial rocks and minerals, advice on mining and quarrying, geological mapping and data dissemination
EDUCATION	Academic education High School Primary Education	Teaching geoscientific disciplines Training professionals

THE FUTURE OF GEOLOGY

- More and better geological education and improved geological information are essential
- Creating and interest in, and the spreading of, geological knowledge:
 - Essential to create conditions for social planning and the management of nature and the environment
- Planning decisions should be based on sound geological information:
 - Evaluate hazards
 - Valorise geological heritage
 - Valorise mineral resources
- Documenting geology in engineering works is a key factor in knowing the territory.
- Adopt the geological perspective by society: this implies a clearly defined political attitude and effort in all fronts: educational, regulatory and implementing measures.
- Stronger and global professional geologists organisations



GEOLOGY FOR THE CITIZENS OF EUROPE: THE EFG ROLE

- **Political**
 - To contribute to the development of European Policies
 - To create Advisory Documents to European Commission and EU Parliament
 - Manifesto on Natural Hazards
 - Manifesto on Geothermal Energy
 - Position paper on carbon capture and geological storage
 - Directive on Renewal Energy in Europe (20/2020)
 - Bologna Working Group
- **Professional Mobility**
 - European Geologist Title
- **Outreach**
 - EU Green Week:
 - ***Geology and environmental change (2007)***
 - ***International Year of Planet Earth (2008)***
 - European Union Sustainable Energy Week (EUSEW)

- EFG objectives on EurGeol Certification
- What is the European Geologist Professional Title?
- Why do I need a professional title?
- Where is the title recognised?
- How to become an EurGeol

Promoting the practice of geology and its relevance.

- ✓ To guarantee the free movement of geologists in Europe.
- ✓ To promote the harmonization of education and training. To define and protect the title of geologist and related professional titles.
- ✓ To promote the code of professional ethics of the EFG

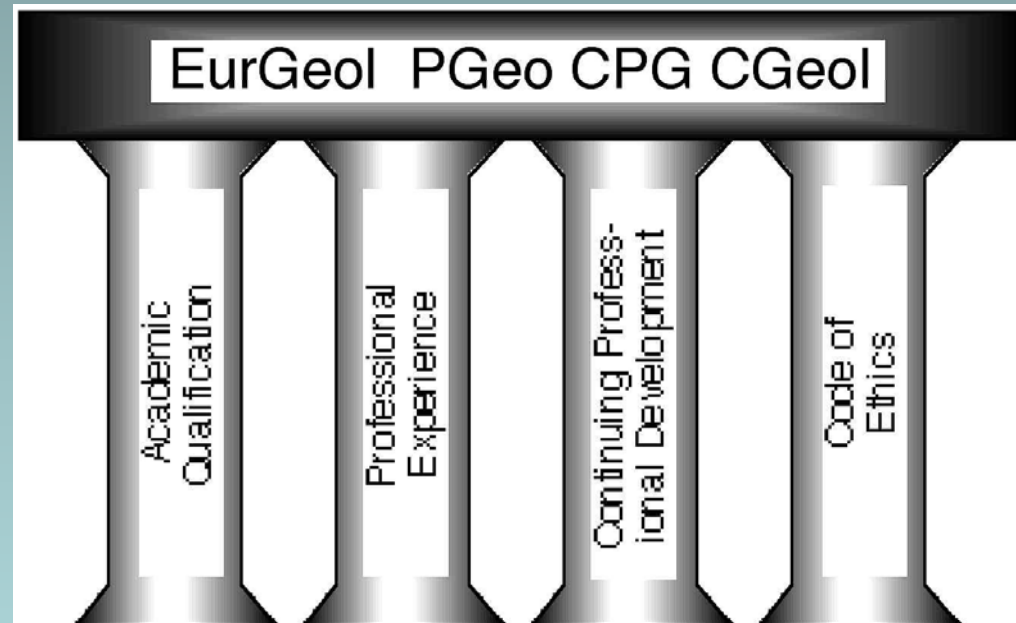
The Qualified Person Concept:

International practice increasingly requires that technical reports must be signed by individuals which:

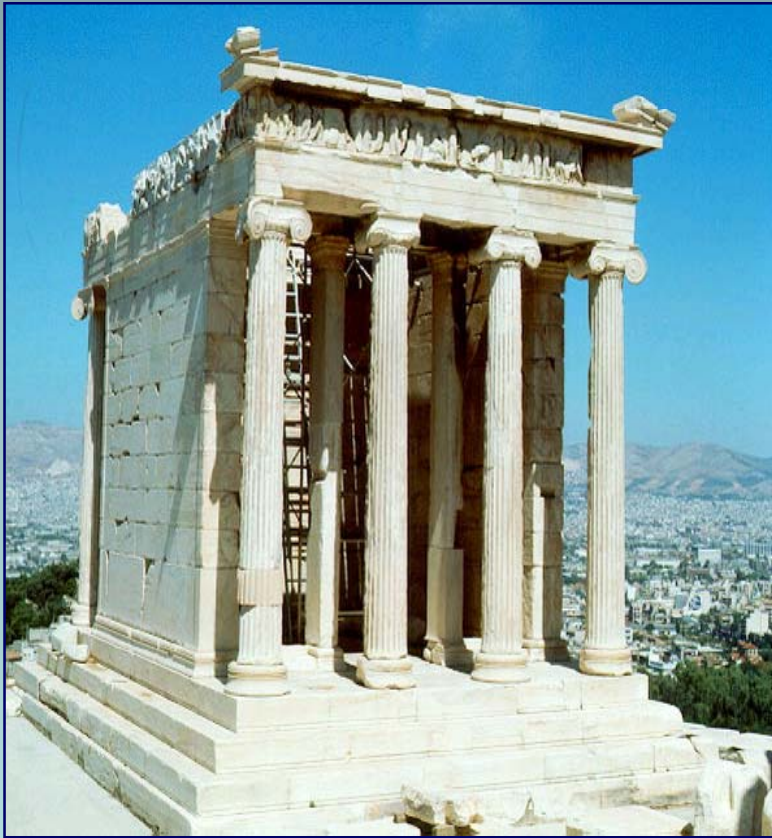
- Have appropriate qualifications
- Are qualified by a relevant Institution (ROPO)
- Have relevant experience to the service provided
- Are professionally up-to-date

PROFESSIONAL TITLES – THE FOUNDATION

- Recognised Academic Qualification
- Have relevant professional experience
- Maintain through structured CPD
- Adhere to Code of Ethics



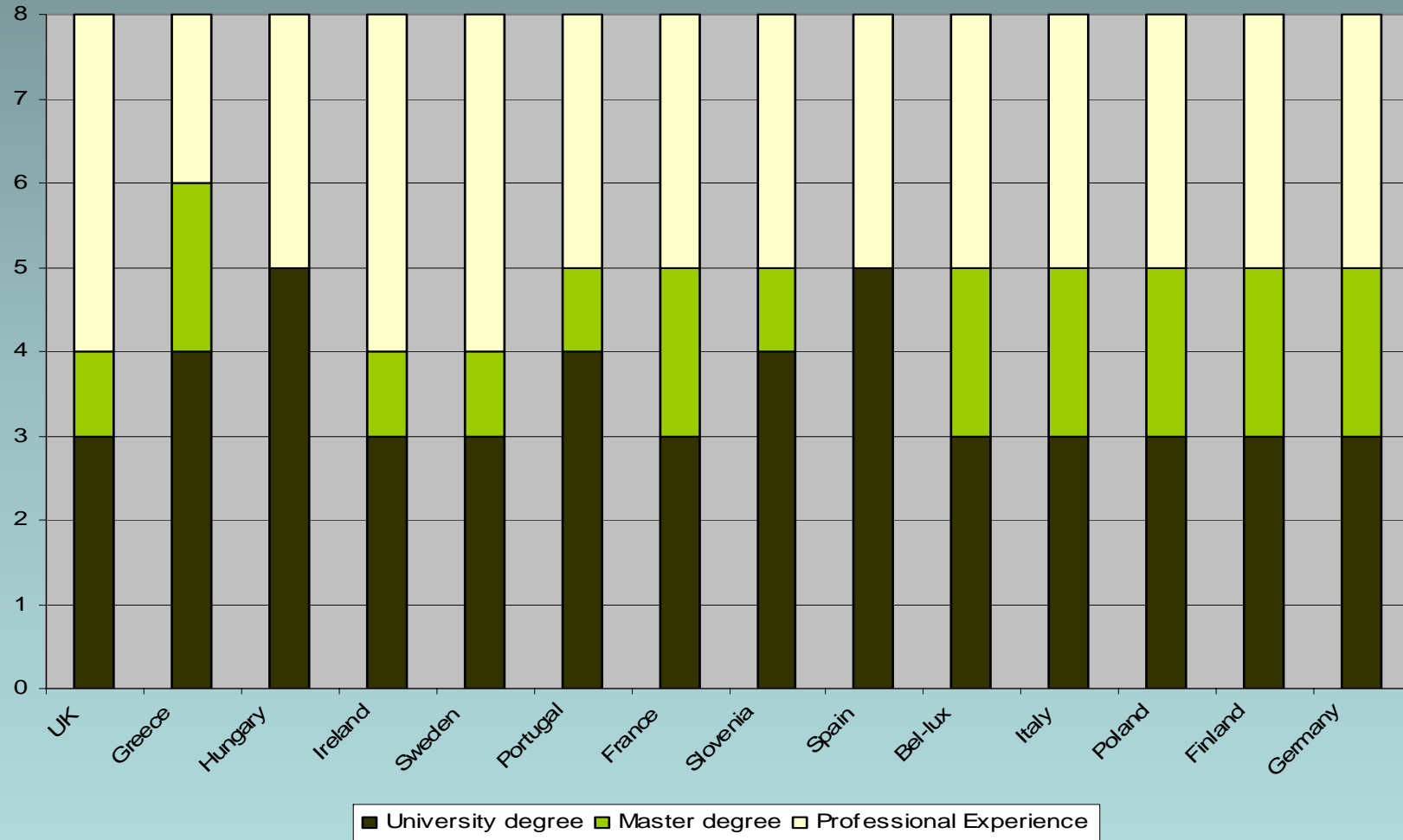
WHAT IS THE PROFESSIONAL TITLE OF EUROPEAN GEOLOGIST?



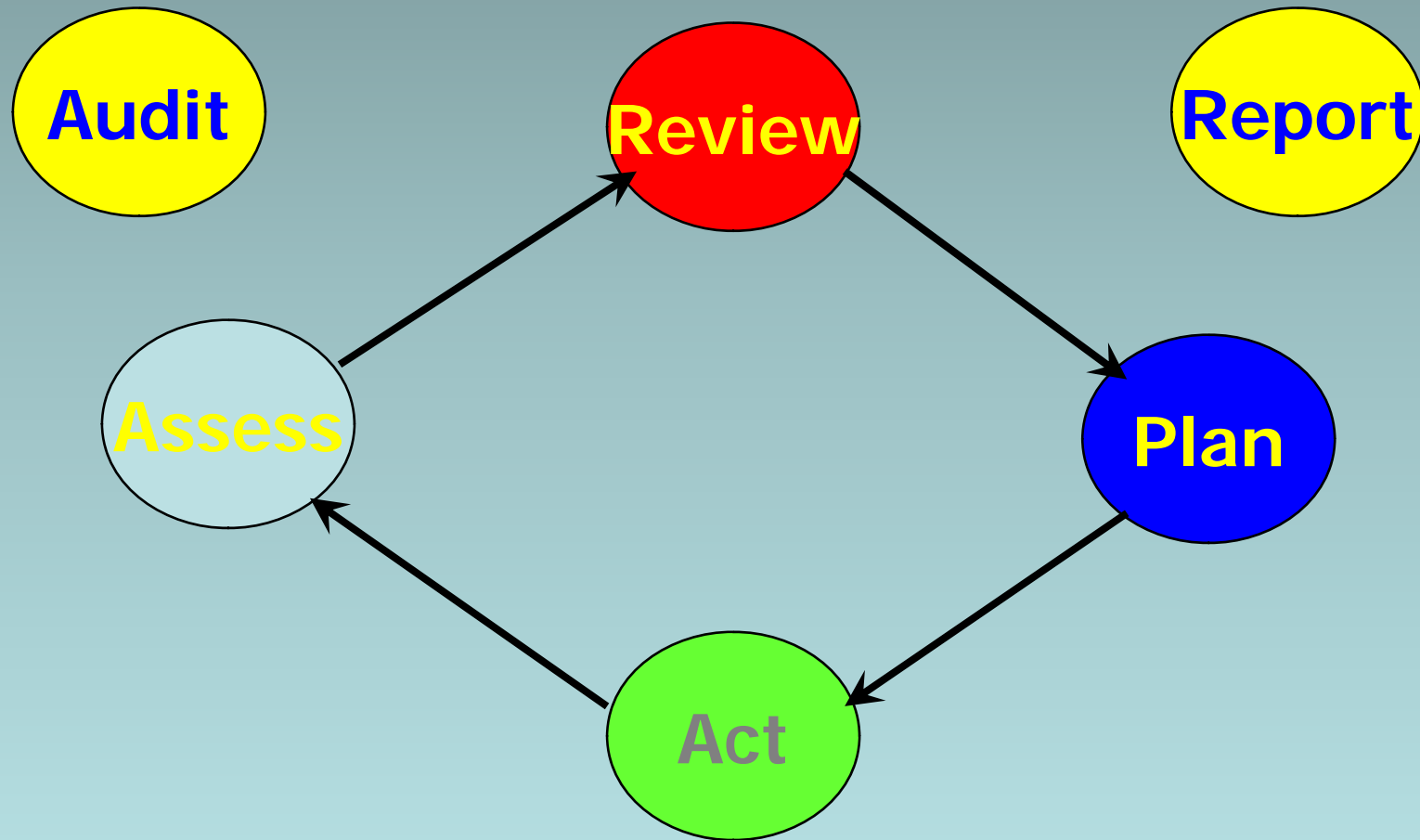
EurGeol Pillars

- Academic qualification
- Professional Experience
- Code of Ethics
- Life-long Learning

EURGEOL TITLE: EXAMPLES OF QUALIFICATION AND EXPERIENCE



EFG LIFE-LONG LEARNING CYCLE



WHY DO YOU NEED A PROFESSIONAL TITLE?

- Professional titles have become important in demonstrating the suitability of a professional to provide geological services.
- The professional title provides a quality mark to demonstrate to clients, regulators and the general public that the individual is competent to provide geological advice, and allows employers to offer competitive commercial services.
- To adapt to the current and future challenges within the geo-political framework of the European Union, it is necessary that geologists achieve, and can demonstrate, a high degree of professional experience to be able to respond to the demands of Society in practicing their profession.

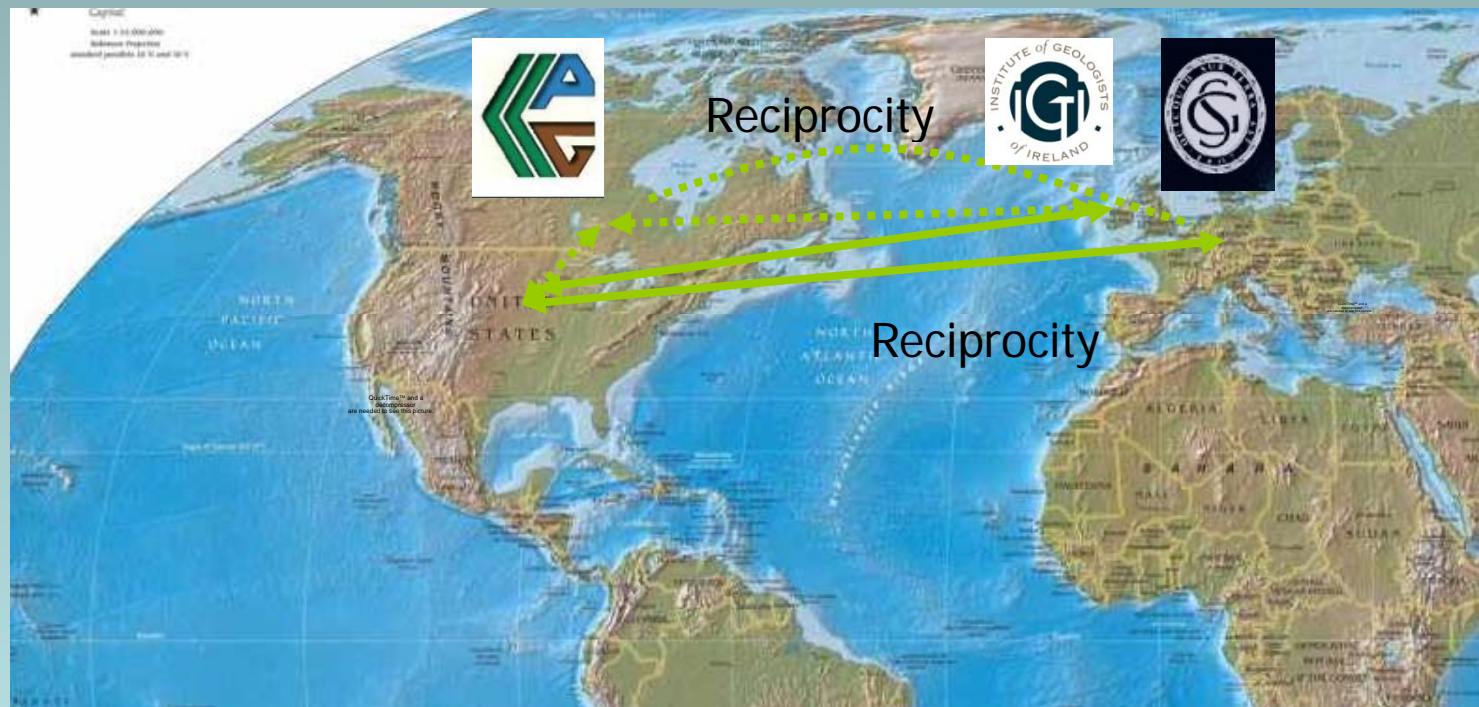
Professional Titles & Mobility

- Mutual Recognition
 - EFG - CCPG
 - IGI - CCPG
- Mutual Reciprocity;
Fast track applications
 - EFG – AIPG
 - IGI – GeoSoc
 - IGI - AIPG
 - GeoSoc - AIPG
- Recognised Overseas
Professional Organisations
(ROPOs)
 - Maintained by
professional bodies
operating on behalf of
Stock Exchanges

PROFESSIONAL RELATIONS N. AMERICA - EUROPE

PROGRESS

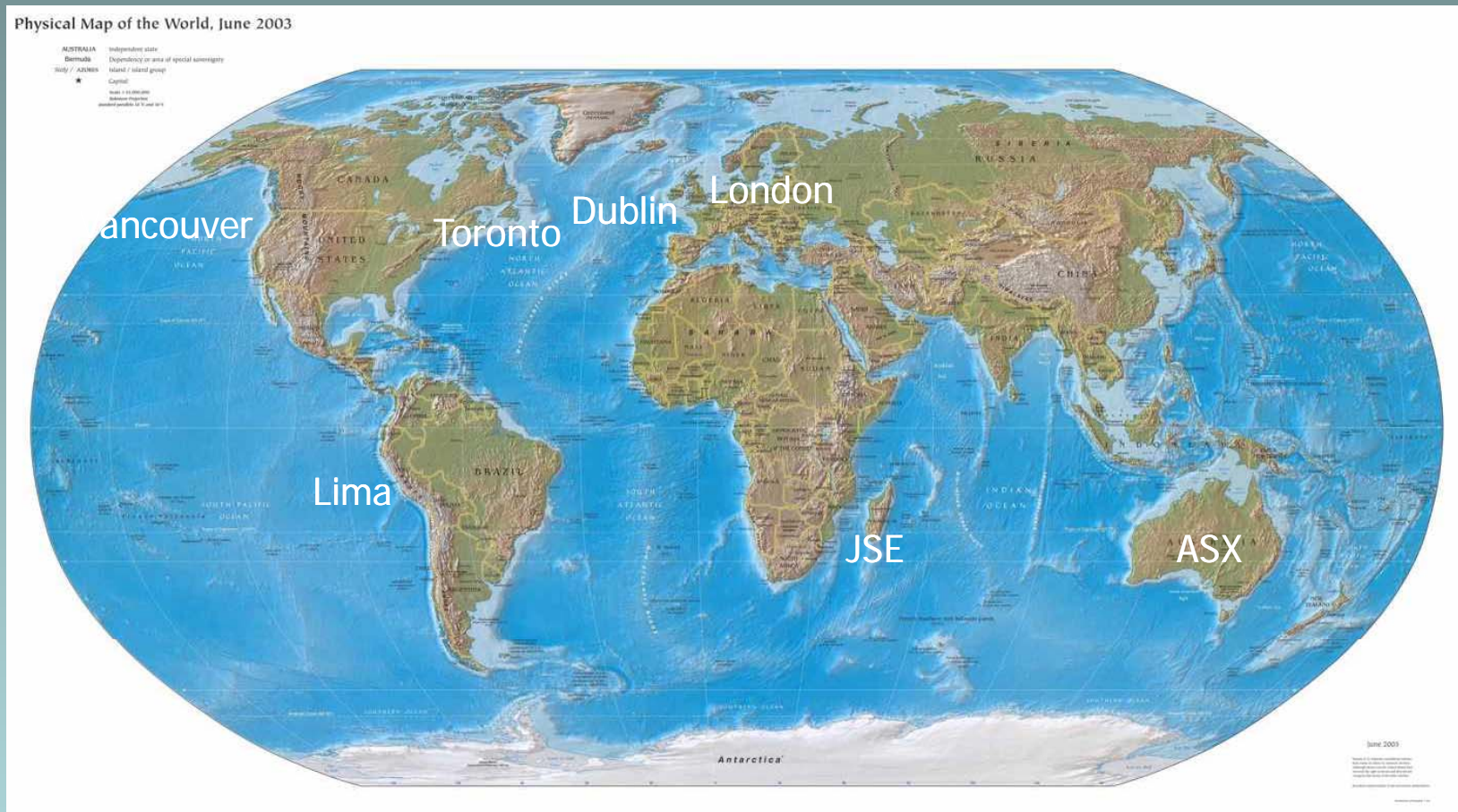
1. Professional qualification
2. Recognition
3. Reciprocity
4. Global Acceptance



WHERE IS THE TITLE RECOGNIZED?

- The title is recognized in all EFG countries as a passport to professional practice (Legal Statute – Spain, Italy, Administrative Procedure – Ireland)
- Reciprocity - USA (AIPG); Canada (CCPG)
- Corporate Acceptance: European Geologists are recognized by the mineral reporting authorities in Australia, Canada, South Africa, London and Perú as professionals accredited to sign reports on mineral reserves and resources within their area of expertise and in the valuation of mining companies quoted on the Stock Exchanges

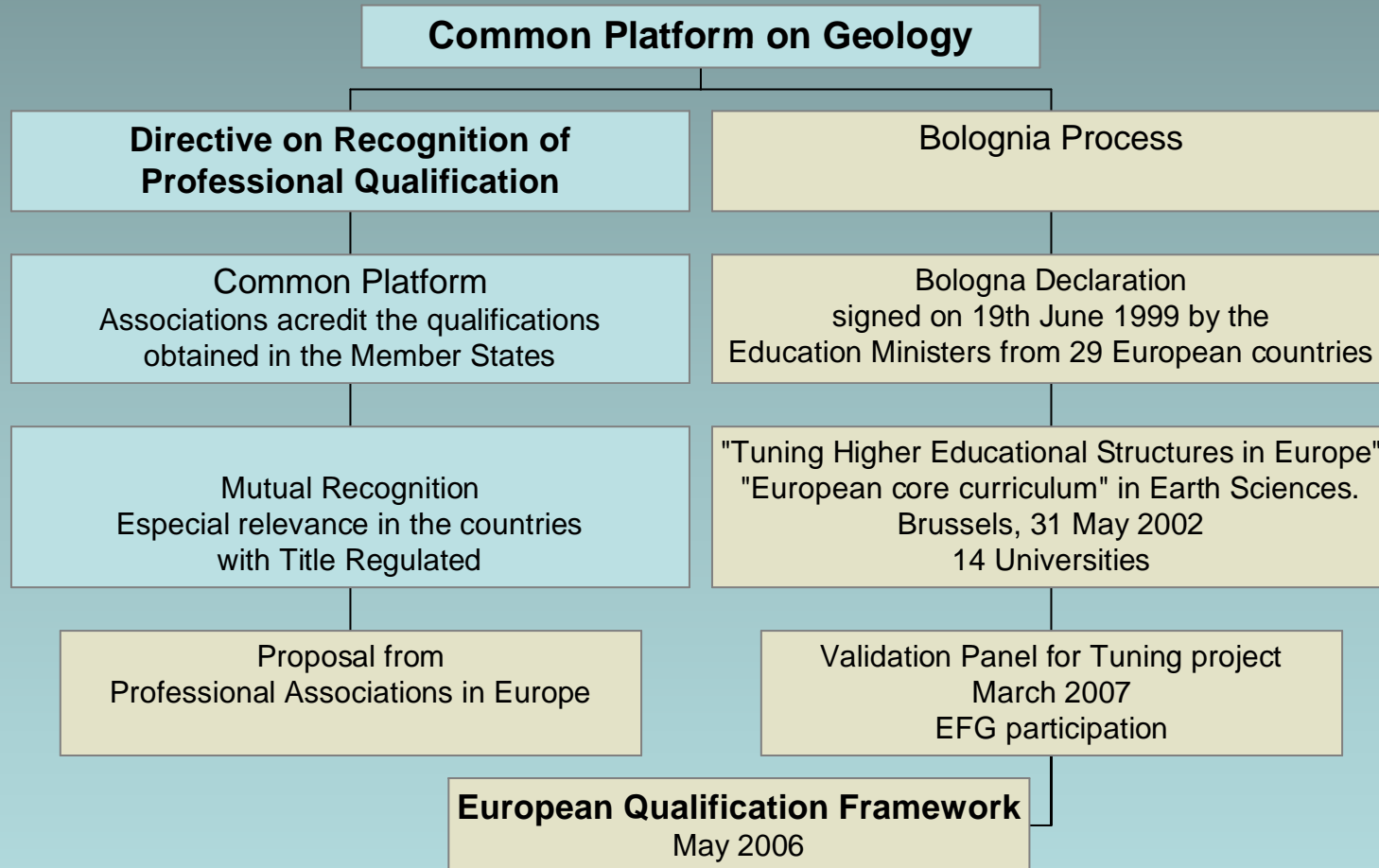
ROPO RECOGNITION FOR EurGeol PGeo



Stock Exchange Recognition

A Fast Growing Trend - Global requirement for professional qualifications

EUROGEOL TITLE AND THE EUROPEAN LEGISLATION



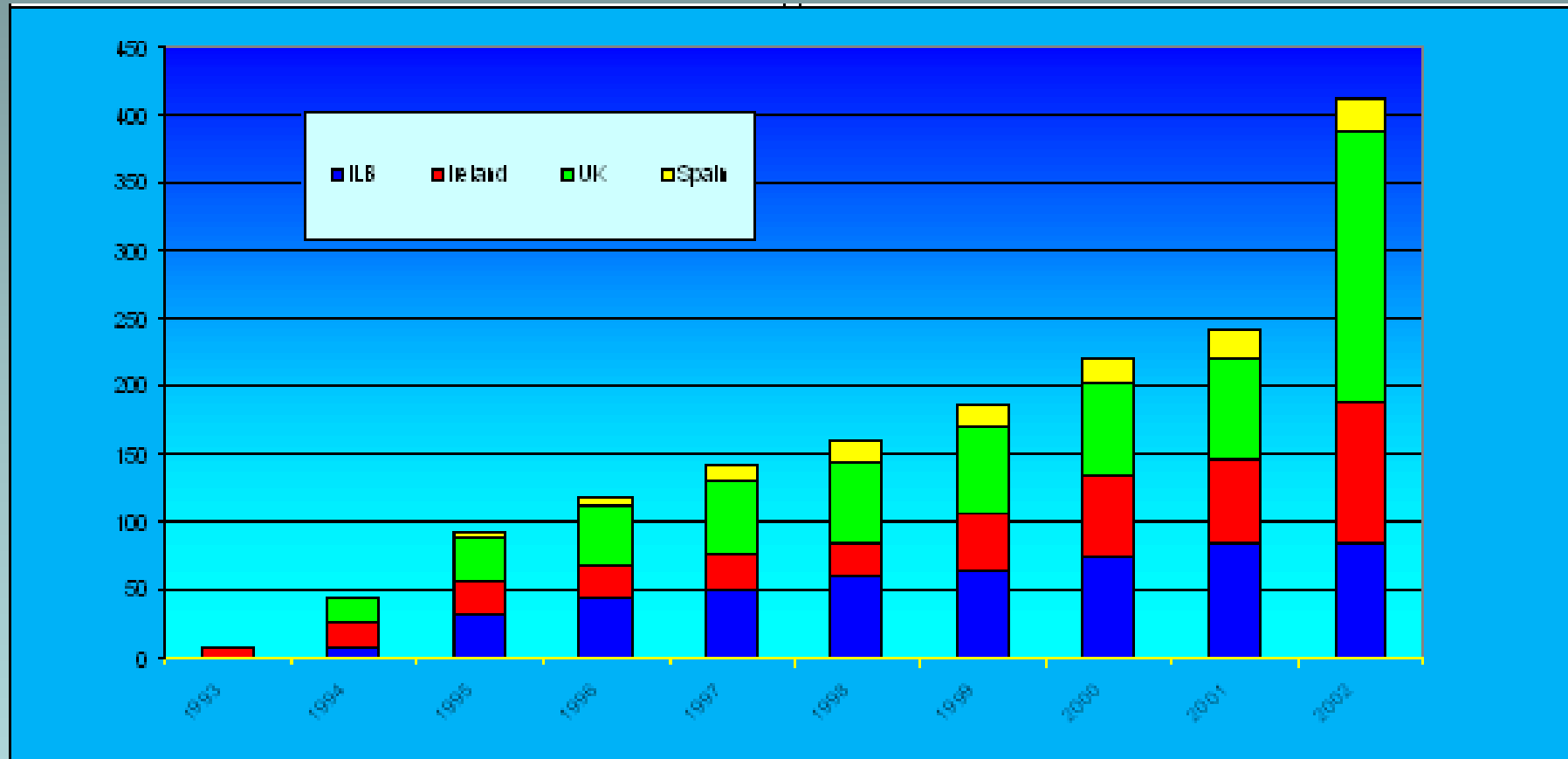
HOW TO BECOME AN EUROGEOL

The European Geologist (EurGeol) title is awarded by the European Federation of Geologists. The process of vetting applications for the title is carried out for the Federation by its Licensed Bodies:

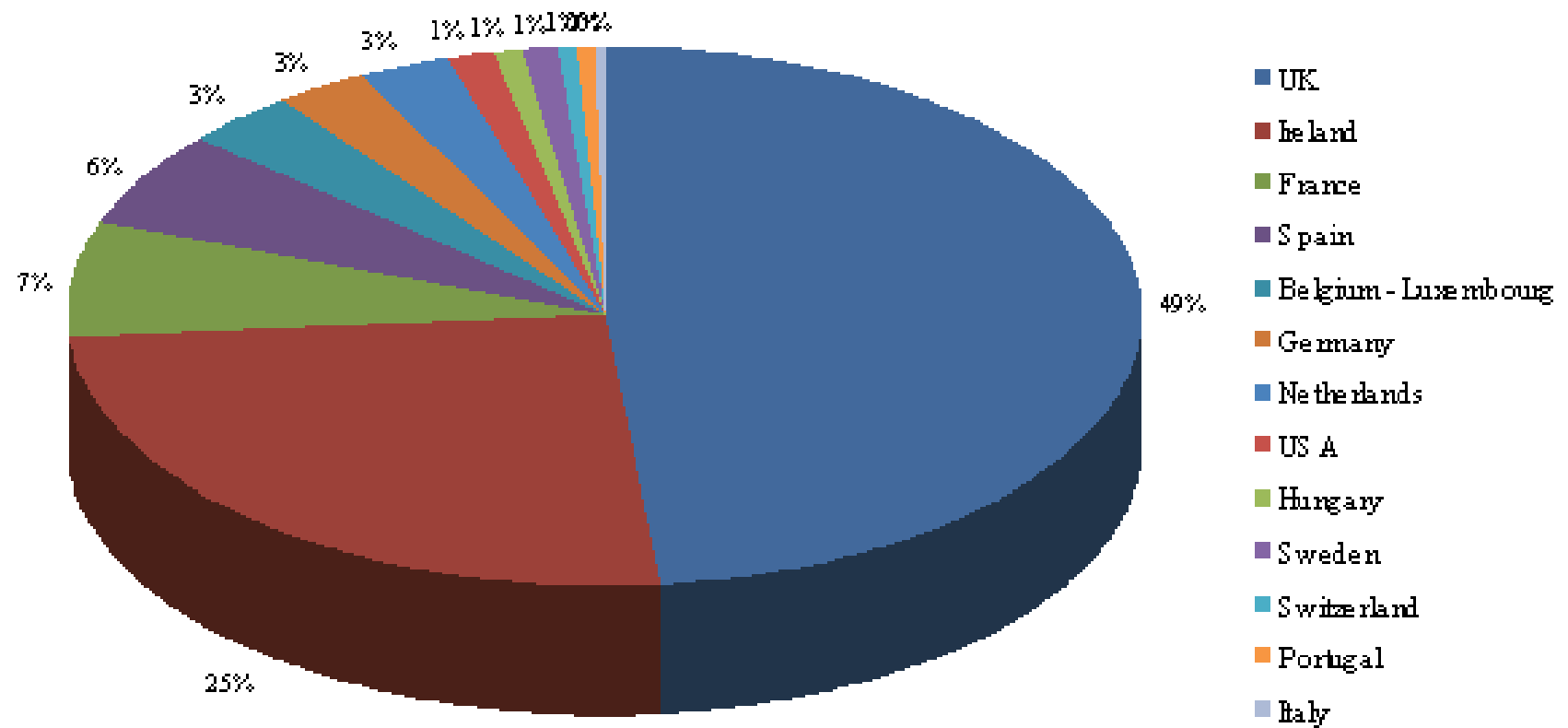
- National Licensed Bodies: Ireland, Spain and the United Kingdom
- International Licensed Body: Applicants from other countries

All info in : www.eurogeologists.eu

EVOLUTION OF THE EURGEOL TITLE



DISTRIBUTION OF THE EURGEOL TITLE



APPLICATION FORM

- ✓ SPONSORS
- ✓ ACADEMIC QUALIFICATIONS (Authenticated copies of degrees/diploma certificate(s) must be included with this application)
- ✓ SECTORS OF EXPERIENCE IN GEOLOGY
- ✓ PUBLICATIONS
- ✓ CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMMES
- ✓ MEMBERSHIP OF OTHER BODIES (Professional and/or Scientific)

GEOLOGY FOR THE CITIZENS OF EUROPE: EFG ROLE

- **Panels of experts**

- **PE on Environmental Impact**

- Leaflet for the Green Week June 2007 "Geology and Environmental Change":
 - » The role of geology in Environmental Impact Assessments (EIAs)
 - » The role of geology in predicting future climate change
- Advice Document to the European Commission on Environmental Impact Assessment Implementation and Practice, May 2003.

- **PE on Geothermal Energy & CO₂**

- Press release on Directive on the promotion of the use of renewable energy sources, January 2008
- EFG Position Paper on Carbon Capture and Geological Storage, January 2008
- Geoscientific recommendations regarding Geothermal Energy to be considered in the Seventh Framework Programme 2007 – 2013, April 2006.

- **PE on Hydrogeology**

- Participation in the European Commission, DG Environment, Working Group on groundwater (WG C) on the preparation of Common Implementation Strategy (CIS)

- **PE on Natural Hazards & Climate Change**

- Participation on the expert meeting for the Commission Communication COM(2008)130 on reinforcing the Union's disaster response capacity and the outline of the upcoming Communication towards an integrated European strategy on the prevention of disasters
- Participation in the European Commission working group EXCIMAP on flood risk mapping

GEOLOGY FOR THE CITIZENS OF EUROPE: EFG ROLE

- PE on Soil Protection and Geological Heritage
 - EFG Amendments for proposal of Directive on Soil Protection, COM (2006) 232, 21 February 2007
 - Geodiversity = Biodiversity, leaflet for Green Week 2006, June 2006
 - EU Manifesto on Earth Heritage and Geodiversity, November 2004
 - European Union Soil Thematic Strategy Geodiversity and Geoheritage as features of Soil Protection, February 2004.
- PE on Resources and Reserves – Minerals and their sustainable use
 - EFG Position Statement on European Technology Platform Sustainable Mineral Resources (ETPSMR), March 2006.
 - EFG Position Statement on Mineral Resources Policy and Management in Europe, March 2006.
 - The qualified person concept EFG submission, with respect to the Directive of the European Parliament and of the Council on the management of waste from the extractive industries, February 2004.
 - An Introduction to the Code for Reporting of Mineral Exploration Results, Mineral Resources and Reserves, October 2001.
 - Code for reporting of Mineral Exploration Results, Mineral resources and mineral reserves, (The reporting Code), October 2001.
- PE on Engineering Geology in Europe
 - Current issues relating to the professional practice of engineering geology in Europe, May 2004.
 - Professional Tasks, Responsibilities and Co-operation in Ground Engineering, July 2004

GEOLOGY FOR THE CITIZENS OF EUROPE: EFG ROLE

– Conferences and technical workshops

- International Conference on Natural Hazards, Rome, May 2007
- International Conference Geology and Water Management: Resources, Risks and Regulations (3R). Athen, May 2008.
- Taiex Workshops:
 - *Workshop on Geodiversity and Sustainable development of the regions, Sibiu, Romania*
 - *Workshop on Sea Level Rise, Climate Change, changing processes and sustainable management of the low coasts of the Baltic states, Poland and Russia*
- EFG Workshop on 33IGC, 9 August 2008, Oslo
- EFG Technical session on 3rd International Professional Geology Conference (IPGC), September 20-24, 2008, Flagstaff, Arizona

– Technical projects

- Geotrained project: Geo-Education for a sustainable geothermal heating and cooling market (Budget 900 000€)
- The European Qualifications Framework (EQF): a common European reference framework
- Terrafirma project

- **Societal benefits of geology**
 - Great contributions of geology to mankind
 - Geological mapping: the foundation of development
 - Humanitarian geology: how geology can help development
- **Geological legislation: helping the change to happen**
 - Geologists in policy and geological policies
 - Natural hazards in planning policies: Global examples
- **Georesources: the limits to growth**
 - Minerals resources global supply
 - Societal benefits of mining
 - Geo-energies: Outlook for a change of the global paradigm
 - Role of geologists in providing water supply
 - Geological Heritage: past, present and future
- **Geological professional associations : role and global experiences**
 - European Federation of Geologists
 - The new World Federation of Geologists
- **Educating in and of geology**
 - Geological outreach: Seeking social acceptance
 - Improving earth sciences performance and professional and scientific geologists production.
 - A new geological hazard: professional extinction.
 - How to attract to our profession the young generations



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Home

Welcome to the EFG Website!

Here you find news, information, and regulations of the EFG. We would appreciate your remarks and comments on our new content management system to improve the online services for you!

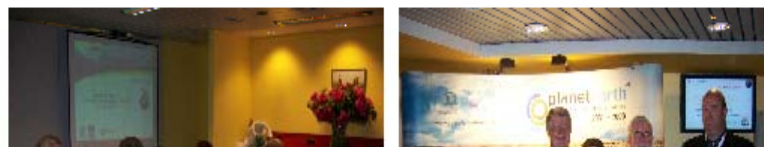
Green Week 2008



EFG participated with a stand and a session on the **Green Week 2008**, 3-6 June 2008

<http://ec.europa.eu/environment/greenweek/home.html> (Official website)

Session:



News

- GeoNews June 2008
- 33rd International Geological Congress
- 3rd International Professional Geology Conference
- See all news...

Internal Links

- Internal Document Service (Password required)
- Distance Learning Server
- Web statistics
- Admin Internal Documents (Password required)

Newsletter

The monthly newsletter sends information about EFG. This service is available in a few days. Then you can submit to the service by inserting your email address in the box below.

E-mail Address
Submit

EFG PROPOSALS



1. Schools to enhance the importance of geology in environment and everyday life. (**Earth science has been part of the curriculum in American schools for more than 100 years**)
2. Geology to be given increased weight in the education of planners, architects, engineers, natural scientists, etc.
3. Geological information made available to the general public in a understandable way.
4. Development of geo-tourism and increasing the number of Geoparks in Europe
5. Adequate geological competence applied in land use planning, in environmental management and in any new development
6. More geologists should be employed in public administrations in Europe
7. Preservation of geological heritage in Europe
8. The quest for renewable energies (particularly low and high enthalpy geothermal) should become a EU priority.
9. Major developments affecting the environment and the exploitation of natural resources must have a compulsory geological study and documentation.
10. Preserving geological diversity, future generations will be able to explore Nature its origin and evolution before and after our time.
- 11. Ultimately, however, the future lies in the hands of students, parents, grandparents, teachers, school administrators, school board officials, and politicians at all levels of government. The future of Earth science literacy — indeed, the future itself — lies in your hands.**



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Thank you !



An good example of how to do it from the American Institute of Geologists

<http://www.youtube.com/watch?v=jxbIJH4fTYo>