



# THE INTERNATIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY (ICGEB)

## AN EXAMPLE OF INTERNATIONAL SCIENTIFIC COOPERATION

Decio Ripandelli - Chisinau, 24 October 2008





## Developing knowledge

*“There is increasing international recognition that science- and technology-intensive solutions to improve the quality of life are not restricted to richer countries, but are required, and can be developed, also by developing countries around the world.”*

Nature Biotechnology 22, DC3-DC7 (2004)

**International Centre for Genetic Engineering and Biotechnology**  
A centre of excellence for research and training in genetic engineering and biotechnology with regard to the needs of developing world

## International Centre for Genetic Engineering and Biotechnology (ICGEB)

- **ICGEB** is an international, intergovernmental organisation conceived as a centre of excellence for advanced research and training in genetic engineering and biotechnology with special regard to the needs of the developing world
- Holds out the prospect of **advancing knowledge** in the fields of
  - ❖ Biomedicine
  - ❖ Crop improvement
  - ❖ Environmental protection/remediation
  - ❖ Biopharmaceuticals production
  - ❖ Biopesticides production
- It **strengthens** the **research capacity** of its members through training and funding programmes and advisory services, representing a comprehensive approach to promoting biotechnology internationally



Originally...

ICGEB

TRIESTE COMPONENT  
& HEADQUARTERS



NEW DELHI  
COMPONENT



Today...

ICGEB

TRIESTE COMPONENT  
& HEADQUARTERS



NEW DELHI  
COMPONENT



CAPE TOWN  
COMPONENT

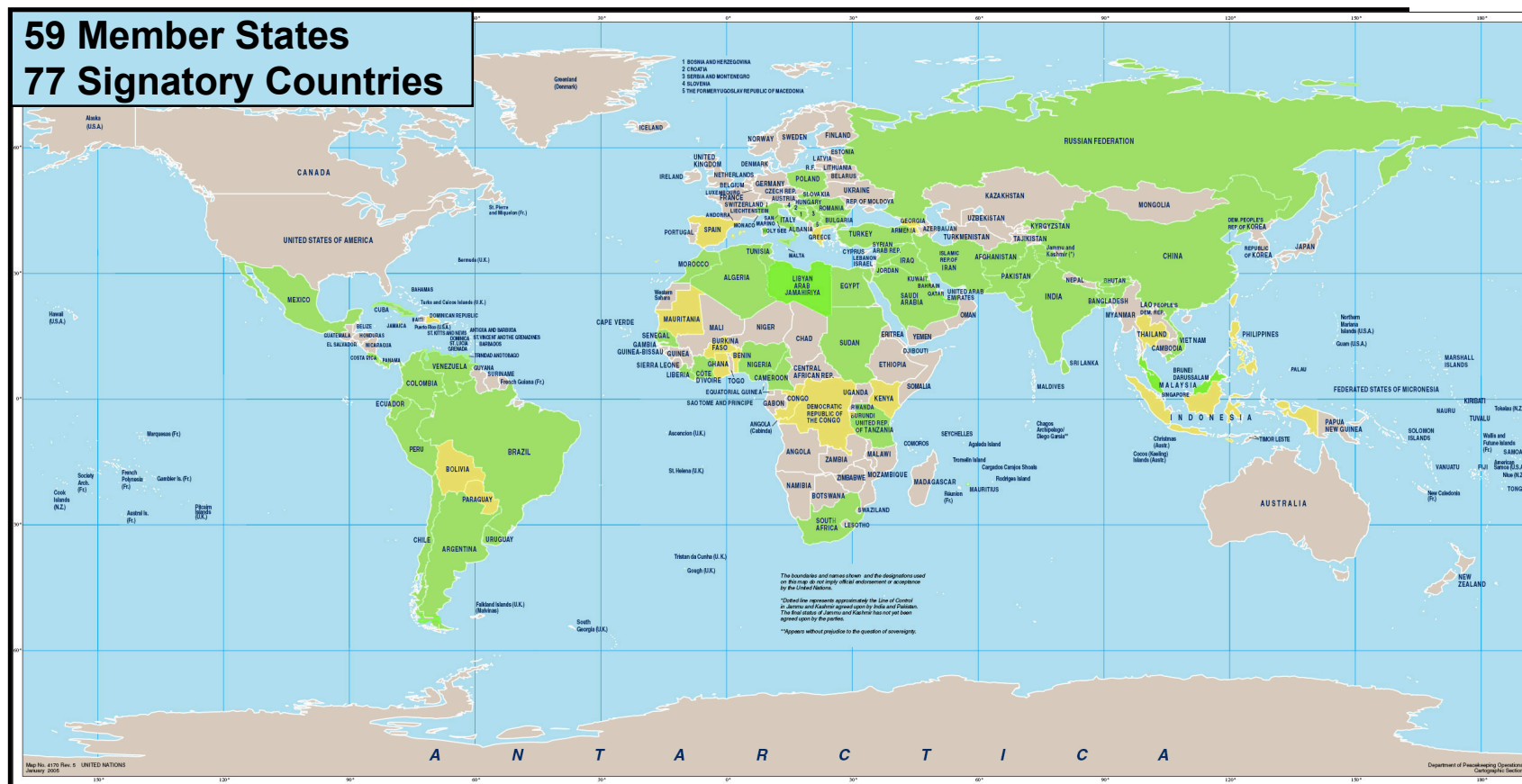






# THE ICGEB CONSTITUENCY

**59 Member States**  
**77 Signatory Countries**



**One Centre: three Components, two Outstations and a Network of Affiliated Centres**



## Developing **knowledge**

- **Research projects**
- **Long term training**
- **Short term training**
- **Collaborative research programme**
- **Cooperation with industrial sector**
- **Scientific services**
- **Institutional services**





## ...facts & figures

- International peer reviewed publications ⇒ **>1.700**
- Long term fellowships ⇒ **600 awarded**
- Short term training ⇒ **9.500 trainees**
- Research grants ⇒ **338 awarded (Euro 13.5 million)**
- Patents ⇒ **55 filed**
- Technology transfer agreements ⇒ **60 signed**



## The Centre: Research and Development Focus

29 research groups, ~400 people

Research programs in several advanced areas of bio-medicine and plant biotechnology including:

- Virology (HIV, papillomavirus, rotavirus, hepatitis B and E, HIV and SARS)
- Human and mouse molecular genetics
- Molecular immunology
- Gene therapy
- Stem cell research
- Recombinant biopharmaceuticals
- Cardiovascular disorders
- Cancer
- Biosafety

- Structural biology (development of synthetic antibodies, crystallography)
- Mammalian biology
- Malaria basic research and vaccine development
- Plant biology (insect resistance, biotesticides, abiotic and biotic plant stresses and crop improvement)
- Technology Transfer

<http://www.icgeb.org>



**INTERNATIONAL INSTITUTION** owned by Member Countries

**CUTTING-EDGE RESEARCH BY SCIENTISTS FROM OVER 50 COUNTRIES** - Equal cooperation North-South (no cookie-cutter approach to development)

**SCIENTIFIC EXCELLENCE** as a major goal - Research activities supervised by an International Scientific Council including several Nobel laureates

Hands-on **CAPACITY BUILDING** for sharing development - Specific courses held all over the world and long-term training (PhD course + post-doctoral) in the 3 Components

Research focus on **TOPICS OF OUTMOST RELEVANCE FOR DEVELOPING COUNTRIES** (HIV, malaria, tuberculosis, vanguard plant biotechnology and biosafety) - No market-driven research

**INTELLECTUAL PROPERTY RIGHTS OWNED AND SHARED** - Research and technology transfer made available to all Member Countries

**Developing knowledge**



# INSTITUTIONAL ACTIVITIES

- **CO-OPERATION AGREEMENT WITH THE UNITED NATIONS (+UNIDO, UNESCO, WHO, ETC.)**
- **JOHANNESBURG SUMMIT ON SUSTAINABLE DEVELOPMENT (RIO +10)**
- **OBSERVER STATUS WITH THE ECONOMIC AND SOCIAL COUNCIL (ECOSOC)**
- **ARTICLE X OF THE BIOLOGICAL WEAPONS CONVENTION**
- **BIOSAFETY AND RISK ASSESSMENT OF GMOs**
- **UN-BIOTECH (GA RESOLUTIONS A/58/200 AND A/60/205)**
- **INTELLECTUAL PROPERTY RIGHTS**



GENERAL ASSEMBLY RESOLUTION A/60/205  
DECEMBER 2005

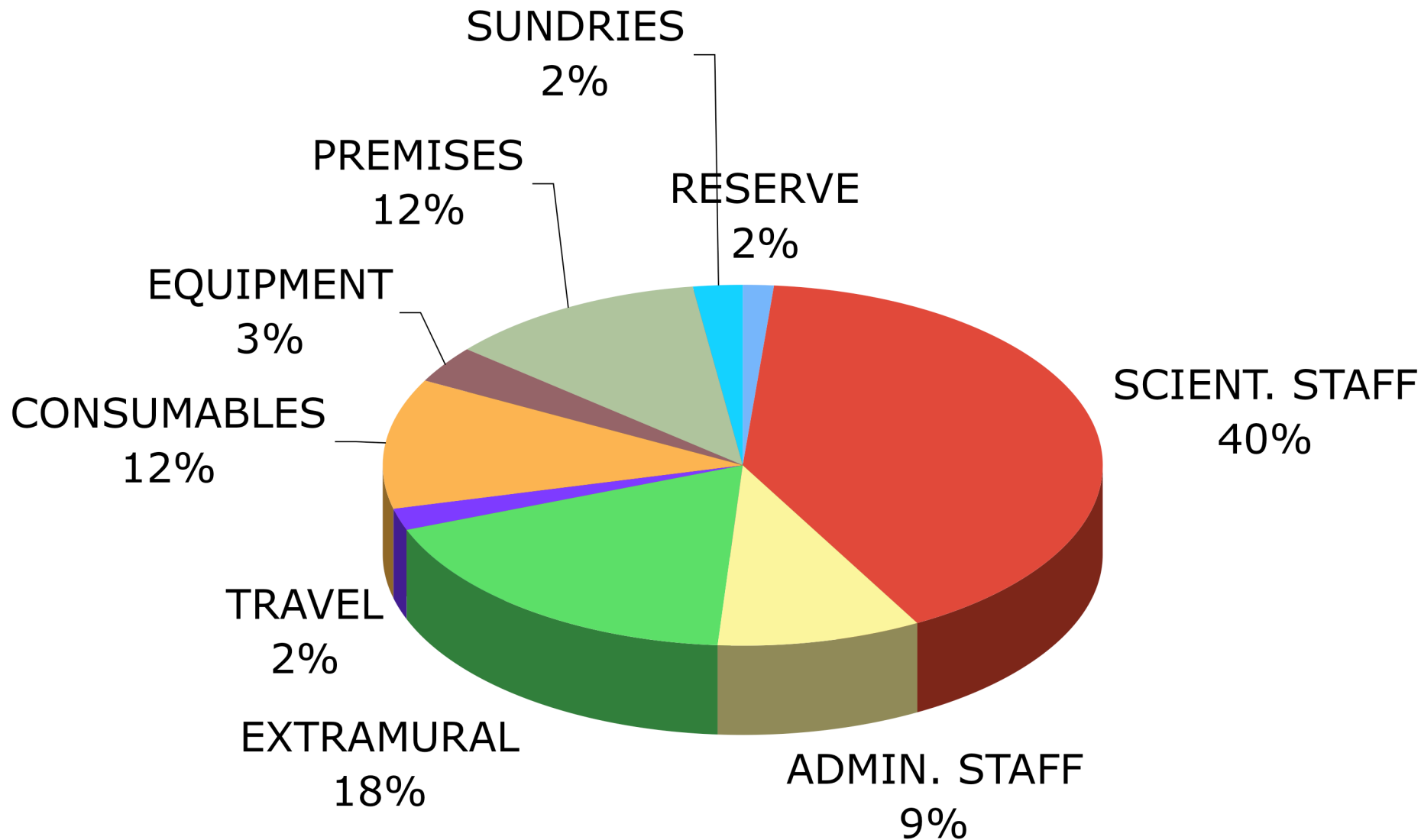


*The General Assembly,*

(...)

**4. *Recognizes* the contribution of the International Centre for Genetic Engineering and Biotechnology and its affiliated centres as well as the United Nations Industrial Development Organization, the United Nations Environment Programme, the Food and Agriculture Organization of the United Nations, the World Health Organization and the United Nations Conference on Trade and Development in the area of biotechnology, and encourages those and other relevant bodies of the United Nations system engaged in biotechnology to collaborate with a view to enhancing effectiveness in the implementation of programmes designed to assist developing countries in building capacity in all areas of biotechnology, including for industry and agriculture, as well as for risk assessment and management of biosafety;**

(...)



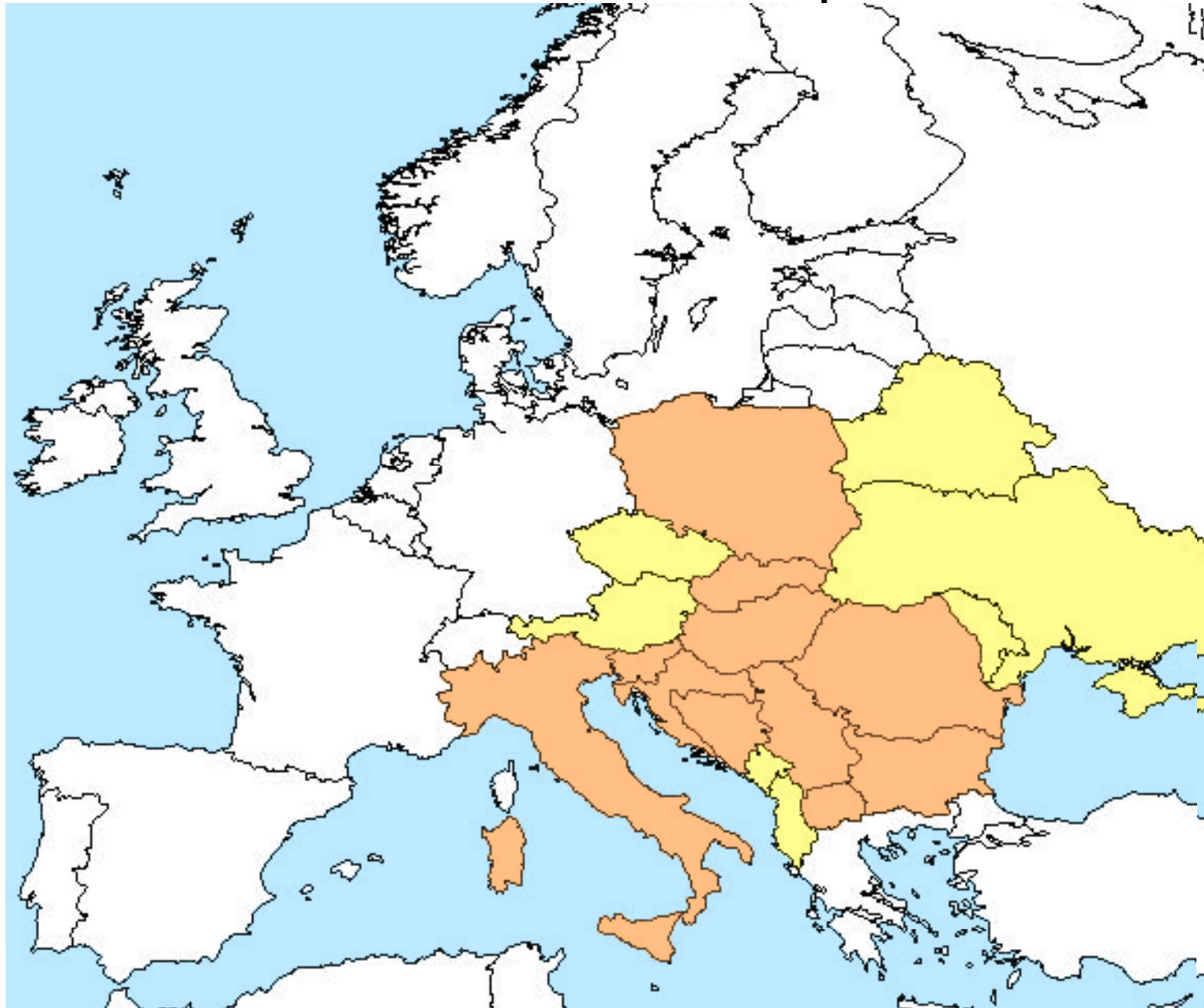
**2008 TOTAL BUDGET = 16,483,000 €**



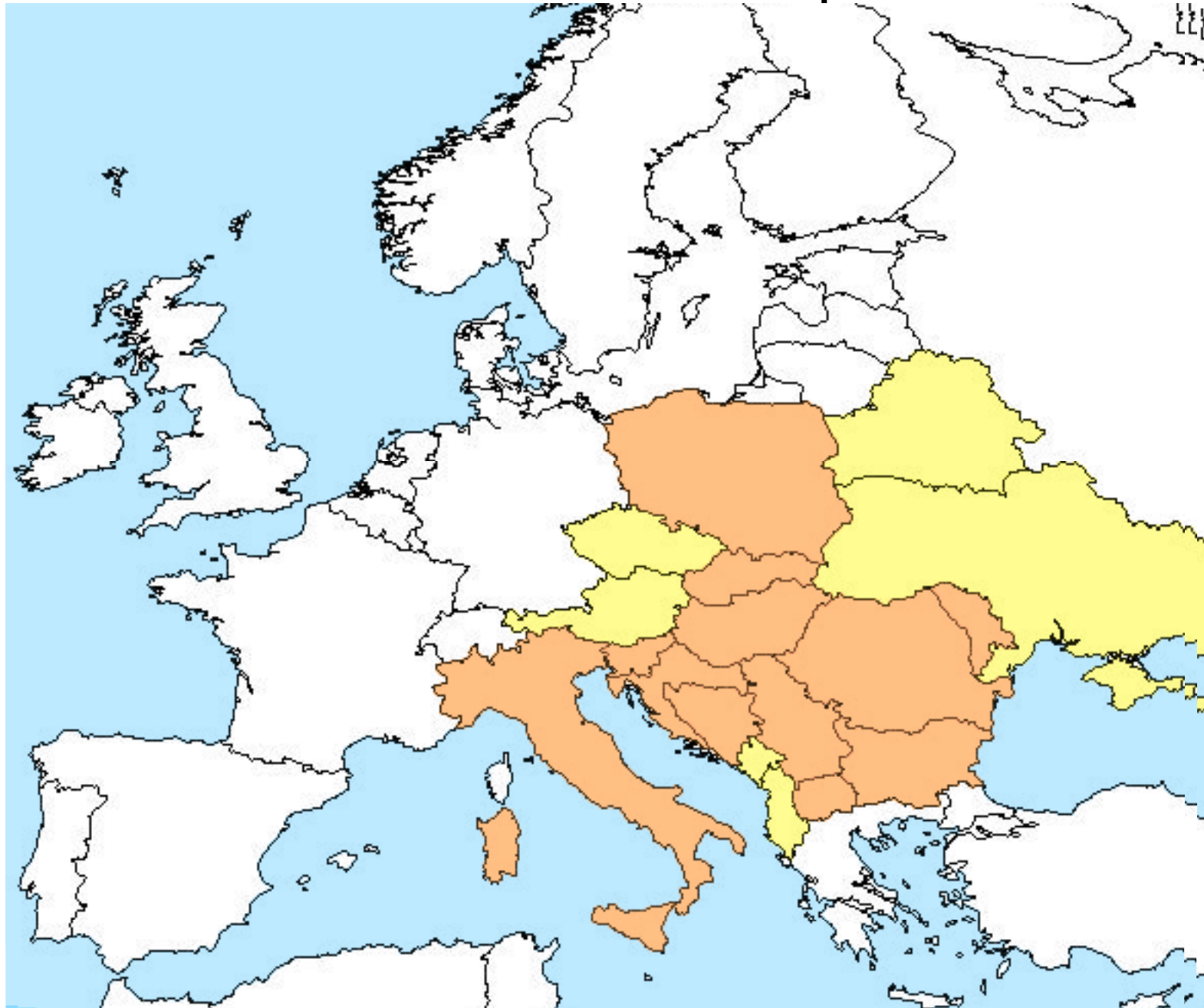
# ICGEB and the Central European Initiative



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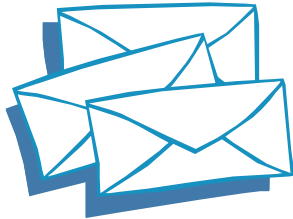


# ICGEB and the Central European Initiative





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