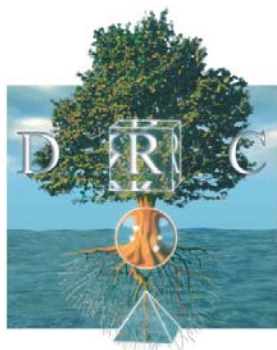


# Danube Rectors' Conference

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Vienna, November 17th and 18th

# Proceedings of the DRC Annual Meeting 2011



# DANUBE RECTORS' CONFERENCE

Conference at BOKU Vienna 17 – 18 November 2011

**DRAFT Conference Programme**

**University of Natural Resources and Life Sciences, Vienna (BOKU)**

**Gregor Mendel Strasse 33, A – 1180 Vienna**

**Wednesday, November 16<sup>th</sup>: Arrival day**

**Thursday, November 17<sup>th</sup>**

08:30 – 10:15 *Meeting of the DRC Presidency*

08:30 – 10:15 Registration and Welcome Coffee

10:15 – 10:20 Rector Prof. Martin Gerzabek

10:20 – 10:30 Mayor of Vienna, Dr. Michael Häupl

10:30 – 10:40 Federal Minister Prof. Dr. Karl-Heinz Töchterle

10:40 – 10:50 EU Commissioner Dr. Johannes Hahn

10:50 – 11:35 The EU Strategy for the Danube Region and its implications for networks like the DRC (Prof. Dr. Erhard Busek)

11:35 – 12:20 University Development in the Danube Region (Prof. Dr. Georg Winckler)

Lunch break

13:15 – 14:30

Challenges in education and research for Life Science Universities – examples for a regional strategy from the BOVA-NOVA-Network (Prof. Lena Andersson-Eklund, Deputy Vice-Chancellor of SLU Sweden)

14:30-15:15 The role of Vienna in the implementation of the Danube strategy in the field of science and education (Planungsdirektor DI Dr Kurt Puchinger)

15:15 –16:00 Visions for the future of Humanities in the Danube Region (Prof. Verena Wirnwarter )

16:00 – 16:30 Coffee

16:30 – 18:30 *Permanent Committee Meeting*

19:00

Departure from BOKU's main entrance for the Conference Dinner, sponsored by the Mayor and Governor of Vienna, Dr. Michael Häupl:  
Restaurant S'Piff, Rathstrasse 4, 1190 Vienna

**Friday, November 18<sup>th</sup>**

08:45 – 09:00

"The Christian-Doppler-Laboratory for Advanced Methods in River Monitoring, Modelling and Engineering and related ideas for the common implementation of the Danube Strategy": Univ. Prof. DI Dr. Helmut Habersack, Head of Christian Doppler Laboratory for Advanced Methods in River Monitoring, Modelling and Engineering

09:00 - 09:20

"The UN Academic Impact Initiative and possibilities for university co-operation with UN organisations": Janos Tisovszky, Acting Director, United Nations Information Service Vienna

09:20 – 09:30

"Co-operation between Life Science Industry and Academia in the Danube Region ", Dr. Konopitzky

09:30 – 09:50:

"CEEPUS – the Central European Exchange Programme for University Studies' options for implementing the EUSDR", Mag. Elisabeth Sorantin, CEEPUS Secretary General

Coffee Break

10:15 – 11:15

Two parallel Workshops, including coffee

1) Lessons learnt from the BOVA-Nova Network (best practice to be used and pitfalls to be avoided by DRC) – Chairperson + case-study presenter: : Thorbjorg Valdis Kristjansdottir, NOVAMNordplus coordinator

2) : Financing possibilities for DRC activities – Chairpersons and Presenters: Dr. Dimitri CORPAKIS, Head of Unit C5 Regional Dimension of Innovation, Directorate General for Research and Innovation; Dr. Katrin Stockhammer (INTERACT)

11:15 - 12:45

*DRC General Assembly*

12:45 – 13:00

Closing session and suggestions for future DRC activities

Lunch, sponsored by the Austrian Federal Ministry of Science and Research

Contact:

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# EU Strategy for the Danube Region - Contributing to a Prosperous Danube Region

**Dr. Erhard Busek**

President, Institute for the Danube and Central Europe (IDM)  
Coordinator, Southeast European Cooperative Initiative (SECI)

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## Content:

- I. EU Strategy for the Danube Region  
–Where do we stand?
- II. Financing Implementation
- III. Economic Impact
- IV. Some food for thought.

2

# I. EUSDR



# I. EUSDR – Structure





# I. EUSDR – Implementation?

- **3x NO to New:**

- institutions;
- legislation;
- funds.

- **But, also 3x YES to:**

- alignment of funds;
- coordination of available instruments;
- new ideas

5

# I. EUSDR – Implementation

- Priority Coordinators and Steering Groups Established;
- Intensive consultation processes on priorities within each PA and their activities ongoing;
- PA 7 – Focus on Mobility, IT and Smart Specialisations, but other priorities also important.

6

## II. Financing proposals

**Proposals for streamlining financing of Danube Projects and EUSDR are being considered:**

- a) **“DANUBE Brokerage PLATFORM FOR FINANCING”** would involve in particular the Structural Fund Programmes, the IPA Coordinators, representatives of the ENPI programmes, the National Funding sources and the main International Financial Institutions.

7

## II. Financing proposals

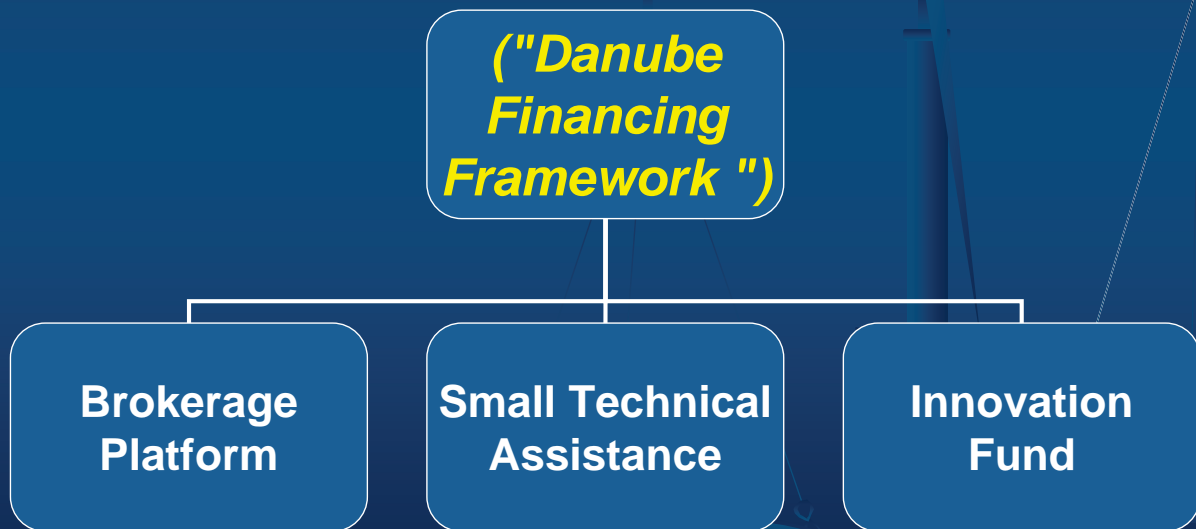
- b) **Danube Research and Innovation Fund (PA 7)** – a fund dedicated specifically to the needs and the requirements of research and education institutions from the Danube Region

**MAJOR FINANCING INSTITUTIONS AND STAKEHOLDER ARE DISCUSSING THE MOST SUITABLE SOLUTION.**

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## II. Financing proposals

- **Potential financing structure**



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## III. EUSDR – Economic impact

- EUSDR Implementation should produce sustainable economic benefits;
- Sustainable economic development is not possible if the members of the economic chain do not communicate with one another;
- Education and research should serve the needs of the market and the market should innovate to produce sustainability – economically as much as socially.

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### III. EUSDR – Sustainability

- Coordination and communication between the various PAs is crucial for producing sustainable economic impact in the Danube Region;
- Each PA should identify how its activities directly / indirectly impact other PAs, both in terms of policies as much as in terms of projects.

#### **HORIZONTAL ACTION**

**Specific PA priorities and projects should try to integrate the directly and indirectly affected PAs in the early stage of development of their activities.**

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### IV. Some food for thought

- **Encourage**
- **Unite**
- **Support**
- **Develop**
- **Respect**

Communicate, Involve, Innovate, Coordinate, Integrate.... and contribute to the EUSDR process in a meaningful way.

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# THANK YOU FOR YOUR ATTENTION

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universität  
wien

## University Development in the Danube Region

Prof. Georg Winckler  
University of Vienna



## Introductory remark (I): Economic Convergence Central Europe/EU 1989 – today:

Real structural convergence

- > catching up with growth (GDP per capita)
- > nominal (monetary) convergence (exc. SK, SLO)

see Colin Clark (1940): three-sector-theory

Chenery (1975+86), Gacs (2003): convergence of labor productivity in the same sectors in different countries (supply factor, convergence of educational systems), unleashing consumer demand (e.g., demand for higher education)

2

## Introductory remark (II): The service sector

Marxist Theory: services not activities that produce new value (only redistribution), „physical economy“, supply of services either impeded (e.g., financial intermediation) or centrally controlled (telecommunication, education)

Unleashing demand for services in a market economy e.g.,  
private universities with few regulations

3

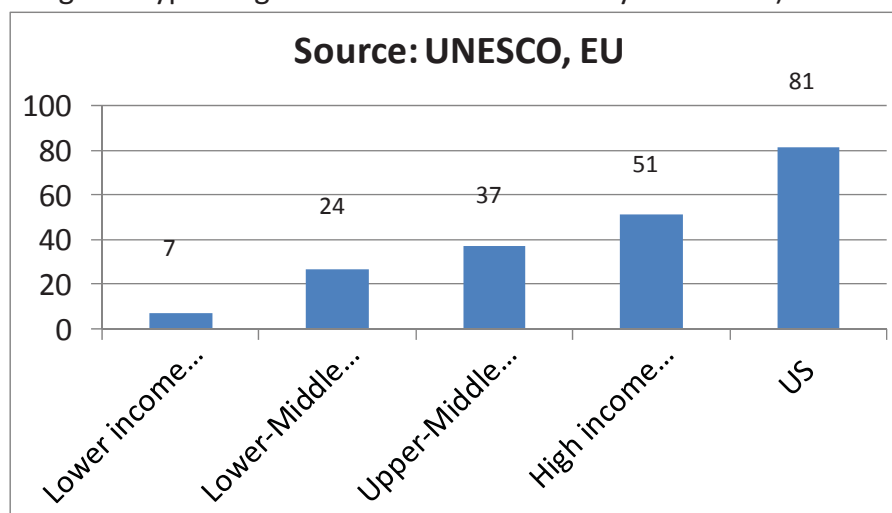
### Introductory remark III: emerging knowledge societies

- The importance of education for employment and growth has, at first, focused on the importance of primary and secondary education. Yet, the capacity to succeed in today's modern society and today's global economy depends more and more on higher education (massification, research based education) and on the implementation and acceptance of research driven innovations. Schumpeterian growth theory!
- „Lisbonisation“ of EU's structural policies

4

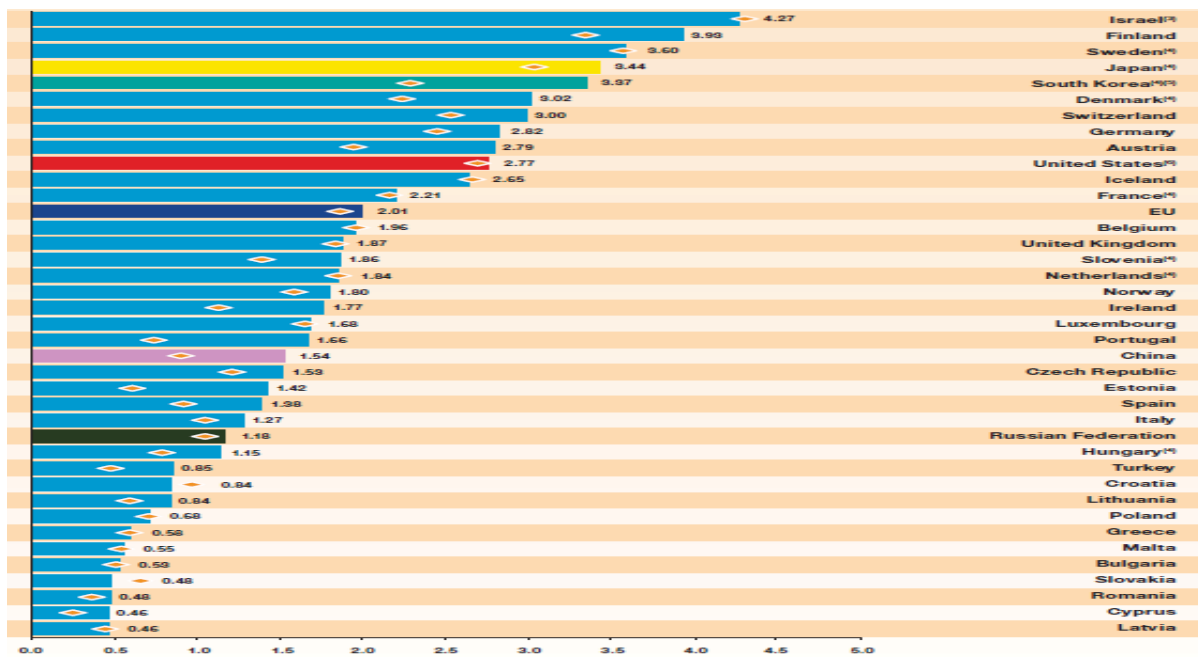
### Introductory remark IV: tertiary education

Average enrolment rate in tertiary education by countries' level of income (2004) (Ratio of tertiary education students to the population having the typical age to be enrolled in tertiary education)



5

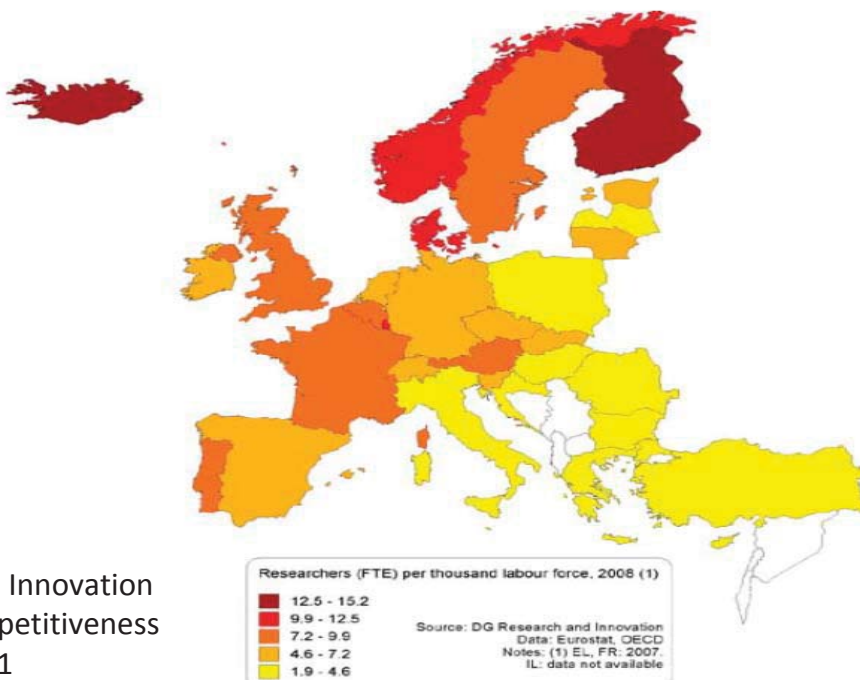
## Facts (1) – R&D Intensity 2000 and 2009



Source: EU, Innovation Union Competitiveness Report 2011

6

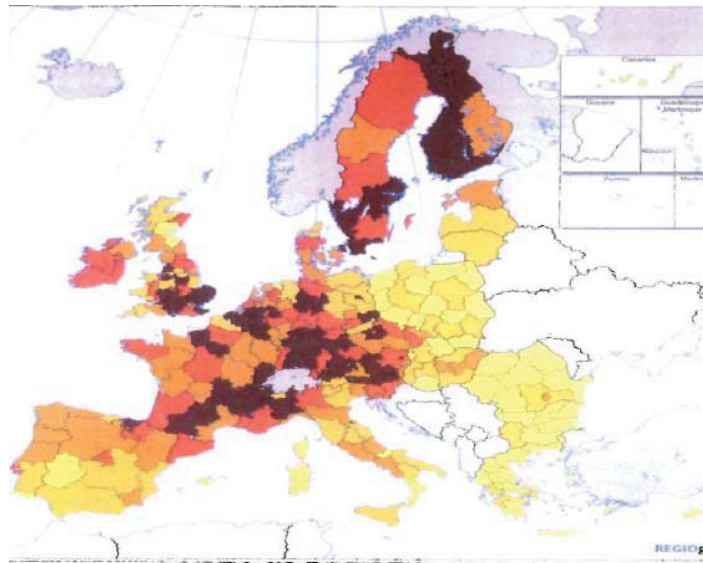
## Facts (2) – Researchers (FTE) per thousand labour force, 2008



Source: EU, Innovation Union Competitiveness Report 2011

7

**Facts (3) - Business R&D expenditure as % of GDP by NUTS 2 regions, 2007**



**R&D expenditure in the business enterprise sector, as % of GDP - 2007**

% of regional GDP

- < 0.1
- 0.1 - 0.4
- 0.4 - 0.7
- > 0.7

EU-27 = 1.10  
 EU8, IT: 2009; FI: 2004; NL: 2009  
 Source: Eurostat

Source: EU, DG Research and Innovation, 2011

**Facts (4) Ausgaben für Bildungseinrichtungen als Prozentsatz des BIP, nach Herkunft der Mittel und Bildungsbereich (2008) Finanziert mit Mittel aus öffentlichen und privaten Quellen (Teil 1)**

	Elementarbereich			Primar-, Sekundar- und postsekundärer, nicht tertiärer Bereich			Tertiärbereich			Alle Bildungsbereiche zusammen		
	Öffentlich <sup>1</sup>	Privat <sup>2</sup>	Gesamt	Öffentlich <sup>1</sup>	Privat <sup>2</sup>	Gesamt	Öffentlich <sup>1</sup>	Privat <sup>2</sup>	Gesamt	Öffentlich <sup>1</sup>	Privat <sup>2</sup>	Gesamt
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<b>OECD-Länder</b>												
Australien	0,04	0,04	<b>0,08</b>	3,0	0,6	<b>3,6</b>	0,7	0,8	<b>1,5</b>	3,7	1,4	<b>5,2</b>
Österreich	0,45	0,06	<b>0,51</b>	3,5	0,1	<b>3,6</b>	1,2	0,1	<b>1,3</b>	5,2	0,2	<b>5,4</b>
Belgien	0,59	0,02	<b>0,61</b>	4,3	0,2	<b>4,4</b>	1,3	0,1	<b>1,4</b>	6,3	0,3	<b>6,6</b>
Kanada <sup>3,4</sup>	x(4)	x(5)	<b>x(6)</b>	3,1	0,4	<b>3,5</b>	1,5	1,0	<b>2,5</b>	4,6	1,4	<b>6,0</b>
Chile <sup>5</sup>	0,59	0,15	<b>0,74</b>	3,3	0,9	<b>4,2</b>	x(9)	x(9)	<b>2,2</b>	4,3	2,7	<b>7,1</b>
Tschechien	0,42	0,04	<b>0,46</b>	2,5	0,3	<b>2,8</b>	0,9	0,2	<b>1,2</b>	3,9	0,6	<b>4,5</b>
Dänemark <sup>4</sup>	0,60	0,14	<b>0,74</b>	4,2	0,1	<b>4,3</b>	1,6	0,1	<b>1,7</b>	6,5	0,6	<b>7,1</b>
Estland	0,53	0,01	<b>0,54</b>	3,8	n	<b>3,9</b>	1,1	0,2	<b>1,3</b>	5,5	0,2	<b>5,8</b>
Finnland	0,36	0,04	<b>0,40</b>	3,8	n	<b>3,8</b>	1,6	0,1	<b>1,7</b>	5,7	0,1	<b>5,9</b>
Frankreich	0,63	0,04	<b>0,67</b>	3,7	0,2	<b>3,9</b>	1,2	0,2	<b>1,4</b>	5,5	0,5	<b>6,0</b>
Deutschland	0,40	0,14	<b>0,54</b>	2,6	0,4	<b>3,0</b>	1,0	0,2	<b>1,2</b>	4,1	0,7	<b>4,8</b>
Griechenland	m	m	<b>m</b>	m	m	<b>m</b>	m	m	<b>m</b>	m	m	<b>m</b>
Ungarn	0,69	m	<b>m</b>	3,0	m	<b>m</b>	0,9	m	<b>m</b>	4,8	m	<b>m</b>
Island	0,75	0,23	<b>0,98</b>	4,9	0,2	<b>5,1</b>	1,2	0,1	<b>1,3</b>	7,2	0,7	<b>7,9</b>
Irland	n	n	<b>n</b>	4,0	0,1	<b>4,1</b>	1,2	0,2	<b>1,4</b>	5,2	0,3	<b>5,6</b>
Israel	0,66	0,19	<b>0,84</b>	4,0	0,2	<b>4,2</b>	0,9	0,7	<b>1,6</b>	5,9	1,4	<b>7,3</b>
Italien	0,48	0,03	<b>0,52</b>	3,2	0,1	<b>3,3</b>	0,8	0,2	<b>1,0</b>	4,5	0,3	<b>4,8</b>
Japan <sup>4</sup>	0,09	0,12	<b>0,21</b>	2,5	0,3	<b>2,8</b>	0,5	1,0	<b>1,5</b>	3,3	1,7	<b>4,9</b>
Korea	0,09	0,10	<b>0,18</b>	3,4	0,8	<b>4,2</b>	0,6	1,9	<b>2,6</b>	4,7	2,8	<b>7,6</b>
Luxemburg	0,45	0,01	<b>0,46</b>	2,8	0,1	<b>2,9</b>	m	m	<b>m</b>	m	m	<b>m</b>
Mexiko	0,59	0,11	<b>0,70</b>	3,1	0,6	<b>3,7</b>	0,9	0,4	<b>1,2</b>	4,7	1,1	<b>5,8</b>
Niederlande	0,38	n	<b>0,39</b>	3,3	0,4	<b>3,7</b>	1,1	0,4	<b>1,5</b>	4,8	0,8	<b>5,6</b>
Neuseeland	0,45	0,04	<b>0,49</b>	3,8	0,6	<b>4,5</b>	1,1	0,5	<b>1,6</b>	5,4	1,2	<b>6,6</b>
Norwegen	0,42	0,08	<b>0,50</b>	5,0	m	<b>5</b>	1,6	0,1	<b>1,7</b>	7,3	m	<b>m</b>
Polen	0,57	0,10	<b>0,67</b>	3,4	0,2	<b>3,6</b>	1,0	0,4	<b>1,5</b>	5,0	0,7	<b>5,7</b>
Portugal	0,37	n	<b>0,37</b>	3,4	n	<b>3,4</b>	0,9	0,5	<b>1,3</b>	4,7	0,5	<b>5,2</b>
Slowakei <sup>5</sup>	0,37	0,08	<b>0,44</b>	2,2	0,4	<b>2,6</b>	0,7	0,2	<b>0,9</b>	3,5	0,6	<b>4,0</b>
Slowenien	0,49	0,14	<b>0,63</b>	3,4	0,3	<b>3,7</b>	1,0	0,2	<b>1,1</b>	4,8	0,6	<b>5,4</b>
Spanien	0,63	0,19	<b>0,82</b>	2,9	0,2	<b>3,1</b>	1,0	0,2	<b>1,2</b>	4,5	0,6	<b>5,1</b>
Schweden	0,67	n	<b>0,67</b>	4,0	n	<b>4,0</b>	1,4	0,2	<b>1,6</b>	6,1	0,2	<b>6,3</b>
Schweiz	0,19	m	<b>m</b>	3,8	0,5	<b>4,3</b>	1,3	m	<b>m</b>	5,3	m	<b>m</b>
Türkei	m	m	<b>m</b>	m	m	<b>m</b>	m	m	<b>m</b>	m	m	<b>m</b>
Ver. Königreich	0,28	n	<b>0,28</b>	4,2	n	<b>4,2</b>	0,6	0,6	<b>1,2</b>	5,1	0,6	<b>5,7</b>
Vereinigte Staaten	0,33	0,08	<b>0,41</b>	3,8	0,3	<b>4,1</b>	1,0	1,7	<b>2,7</b>	5,1	2,1	<b>7,2</b>

Source: OECD, 2011

**Facts (4) Ausgaben für Bildungseinrichtungen als Prozentsatz des BIP, nach Herkunft der Mittel und Bildungsbereich (2008) Finanziert mit Mittel aus öffentlichen und privaten Quellen (Teil 2)**

OECD-Durchschnitt	0,44	0,07	0,91	3,5	0,3	3,7	1,0	0,5	1,5	5,0	0,9	6,9
OECD insgesamt	0,38	0,08	0,44	3,4	0,3	3,7	0,9	1,0	1,9	4,7	1,4	6,1
EU21-Durchschnitt	0,47	0,05	0,81	3,4	0,2	3,6	1,1	0,2	1,3	4,8	0,5	5,5
Sonst. G20-Länder												
Argentinien	0,43	0,13	0,57	4,0	0,3	4,3	0,9	0,2	1,2	5,3	0,7	6,1
Brasilien	0,41	m	m	4,1	m	m	0,8	m	m	5,3	m	m
China	m	m	m	m	m	m	m	m	m	3,3	m	m
Indien	m	m	m	m	m	m	m	m	m	m	m	m
Indonesien <sup>3</sup>	0,02	m	m	2,9	m	m	0,3	m	m	3,3	m	m
Russische Föd.	0,61	0,09	0,70	2,0	0,1	2,1	0,9	0,5	1,5	4,1	0,7	4,7
Saudi-Arabien	m	m	m	m	m	m	m	m	m	m	m	m
Südafrika	m	m	m	m	m	m	m	m	m	m	m	m
G20-Durchschnitt	m	m	m	m	m	m	m	m	m	4,4	m	m

Source: OECD, 2011

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## Facts (5)

Higher education institutions/universities in the EU:

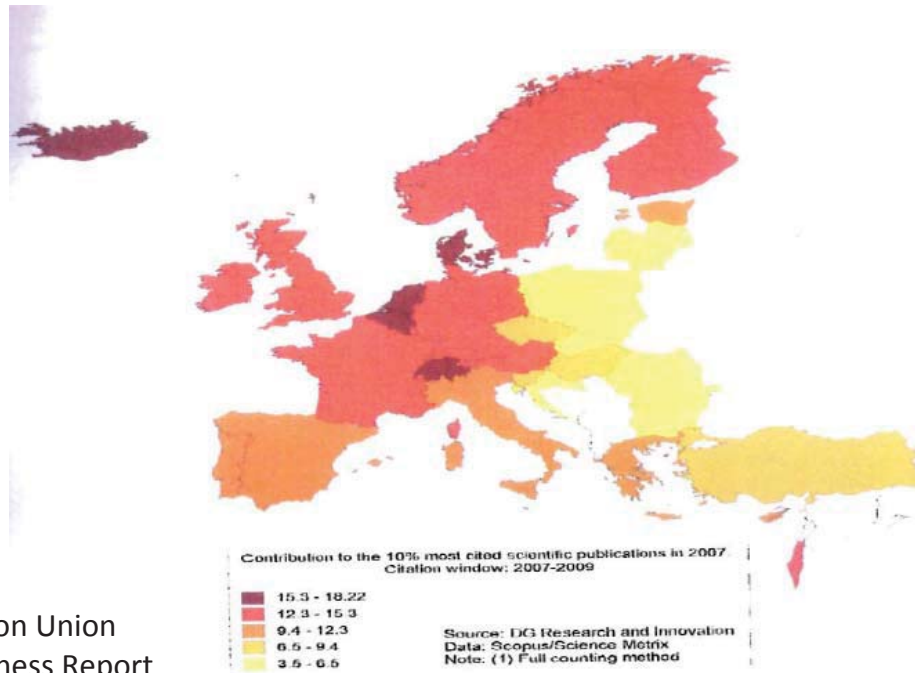
Total Number of HEIs	2906
research-active HEIs	1364
Ph.D. awarding institutions	850
highly research-intensive universities	171

Source: EU, Innovation Union Competitiveness Report 2011

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## Facts (6) Scientific productivity



EU, Innovation Union  
Competitiveness Report

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## Facts (7) - The 171 most productive universities in science account for 60 % of total scientific production

	Top European research universities		Scientific publications 2000-2006	
	Total	% distribution	Total	Share in total national scientific publications %
Germany	35	20	348 469	54
United Kingdom	32	19	401 967	58
Italy	18	11	180 032	53
France	14	8	136 921	30
Netherlands	11	6	144 759	73
Spain	10	6	93 493	37
Sweden	10	6	115 579	78
Belgium	7	4	73 883	67
Switzerland	7	4	85 071	60
Finland	5	3	43 804	60
Austria	4	2	37 025	49
Denmark	4	2	52 149	67
Norway	3	2	27 023	50
Greece	2	1	19 364	31
Poland	2	1	12 877	11
Portugal	2	1	12 100	27
Croatia	1	1	5 806	43
Czech Republic	1	1	10 148	21
Ireland	1	1	5 914	19
Slovenia	1	1	9 306	56
Turkey	1	1	7 145	7
Bulgaria	0	0	0	0
Estonia	0	0	0	0
Cyprus	0	0	0	0
Latvia	0	0	0	0
Lithuania	0	0	0	0
Luxembourg	0	0	0	0
Hungary	0	0	0	0
Malta	0	0	0	0
Romania	0	0	0	0
Slovakia	0	0	0	0
<b>Total</b>	<b>171</b>	<b>100</b>	<b>0</b>	<b>0</b>

Source: EU, Innovation Union Competitiveness Report 2011

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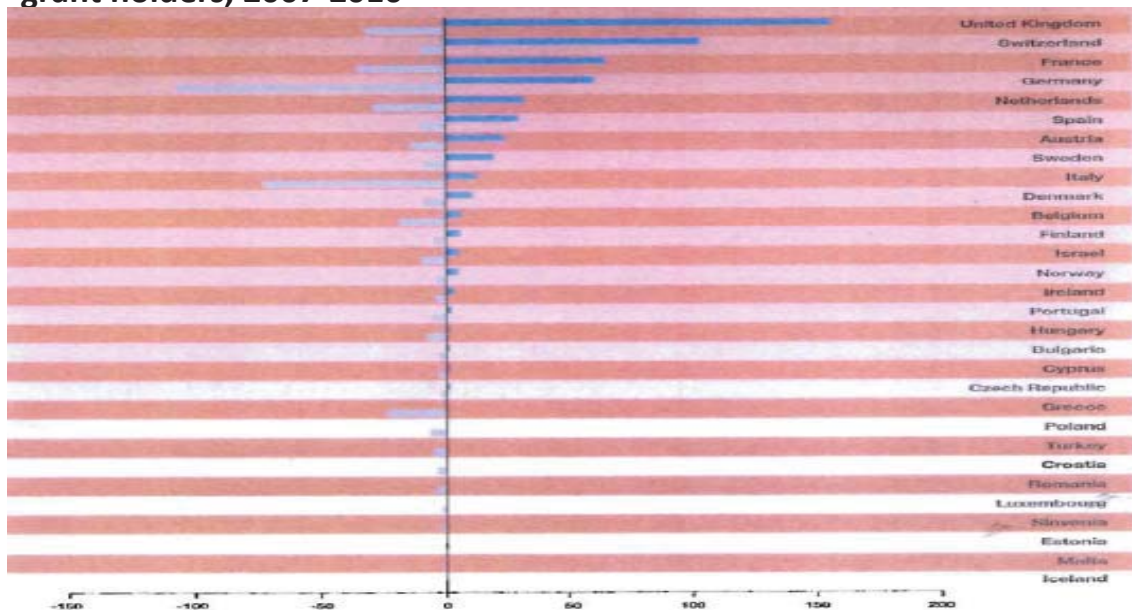
Facts (8) – Research institutions with 10 or more European Research Council (ERC) grantees

Rank	Host institution	Starting grants	Advanced grants	Total
1	National Centre for Scientific Research (CNRS)	62	34	96
2	University of Cambridge (1)	25	22	47
3	Max Planck Society	22	22	44
4	University of Oxford (2)	22	21	43
5	Swiss Federal Institute of Technology of Lausanne (EPFL) (3)	19	20	39
6	Hobrow University of Jerusalem (4)	20	10	30
7	Swiss Federal Institute of Technology (ETH Zurich) (5)	9	23	32
8	Weizmann Institute	15	17	32
9	Imperial College (6)	14	14	28
10	University College London (7)	14	13	27
11	National Institute for health and medical research (INSERM)	14	10	24
12	Commission for Atomic Energy (CEA)	10	0	20
13	University of Edinburgh (8)	10	0	10
14	University of Zurich (9)	8	10	18
15	Catholic University of Leuven (10)	15	2	17
16	Tachion - Israel Institute of Technology	14	3	17
17	Karolinska Institute (11)	8	8	16
18	Ludwig Maximilian University Munich (12)	5	10	15
19	University of Helsinki (13)	7	9	16
20	Leiden University (14)	7	7	14
21	National Institute for Research in Computer Science and Control (NBIA)	0	0	14
22	University Amsterdam (15)	8	6	14
23	University of Bristol (16)	5	9	14
24	University of Vienna (17)	6	8	14
25	Free University of Amsterdam (18)	10	3	13
26	Radboud University Nijmegen (19)	9	4	13
27	Utrecht University (20)	8	5	13
28	Medical Research Council	6	6	12
29	University of Amsterdam	5	7	12
30	University of Geneva	4	8	12
31	Alps University	6	5	11
32	Chert University	10	1	11
33	Leid University	5	6	11
34	Pasteur Institute	7	4	11
35	University of Heidelberg	5	6	11
36	Stockholm University	6	5	11
37	Cancer Research UK	3	7	10
38	National Research Council (CNR)	10	0	10
39	Technical University Munich	5	5	10
40	University of Copenhagen	6	4	10
41	University of Groningen	9	1	10

Source: EU, Innovation Union Competitiveness Report 2011

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Facts (9) – International mobility of European Research Council (ERC) grant holders, 2007-2010

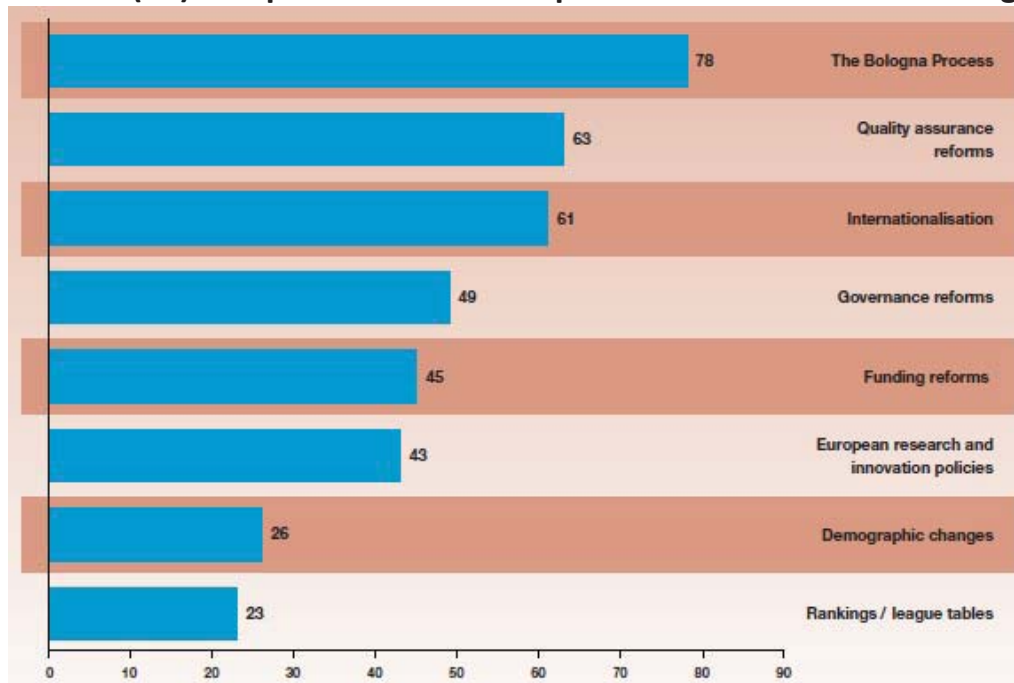


Source: EU Research and Innovation Data: European Research Council (ERC) 2007-2010. Advanced grants: 2006, 2009, 2010.

Source: EU, Innovation Union Competitiveness Report 2011

5

## Facts (10) – Importance of development for institutional strategy



Source: EU, Innovation Union Competitiveness Report 2011

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## Diversification of the higher education system (I)

- International trends in research intensification: US, Asia
- The search for economic relevance (MIT 1997; Geiger 2006)
  - 1980s: „collaborative research“
  - 1990s: emergence research/science based technologies
  - 2000s: downstream vs. upstream strategies

17

## Diversification of the higher education system (II)

### National Measures

- UK: - Research Assessment Exercise  
(2007: approx. 50% of the academic staff  
inactive in research?)
- D, F, Spain - Upstream Strategies: Cambridge  
- Initiative for Excellence („Exzellenzinitiative“)
- DK: - Integration of non-university  
governmental basic research  
within the universities
- B (Flamen): - Only two top universities (Luven, Gent) ?
- S, FIN: - Existing plan for diversification

18

## Diversification of the higher education system (III)

- European competition (FP7, ERC): diversification from below  
Classification (types of the HEI): diversification from above?
- EUA position:  
Autonomy, „fit for purpose“  
(„autonomous“ diversification)

19

## Emergence of knowledge regions

- Øresund (Copenhagen – Malmö)
- Barcelona (Parc de Recerca Biomèdica de Barcelona)
- Manchester – upstream strategies
- Brno (EU-structural funds)
- Zurich (University of Zurich – ETH Zurich)

## Conclusions

- (1) Invest more and better in higher education institutions/universities
- (2) Invest more and better in research and innovation
- (3) Lisbonisation of Structural Funds, Horizon 2020
- (4) Professionalisation of curricula („employability“), Bologna Process, while enhancing research-based undergraduate education at (some) HEIs
- (5) Concentrate Ph.D. education in research-intensive departments in (some) universities
- (6) Strengthen the research intensification in some universities through initiatives for excellence



# University Development in the Danube Region

Prof. Georg Winckler  
University of Vienna

22

## **Challenges for Life Science universities the NOVA-BOVA networks as examples of a regional strategy**

Lena Andersson-Eklund, Swedish University of Agricultural Sciences  
DRC BOKU Vienna, November 17, 2011

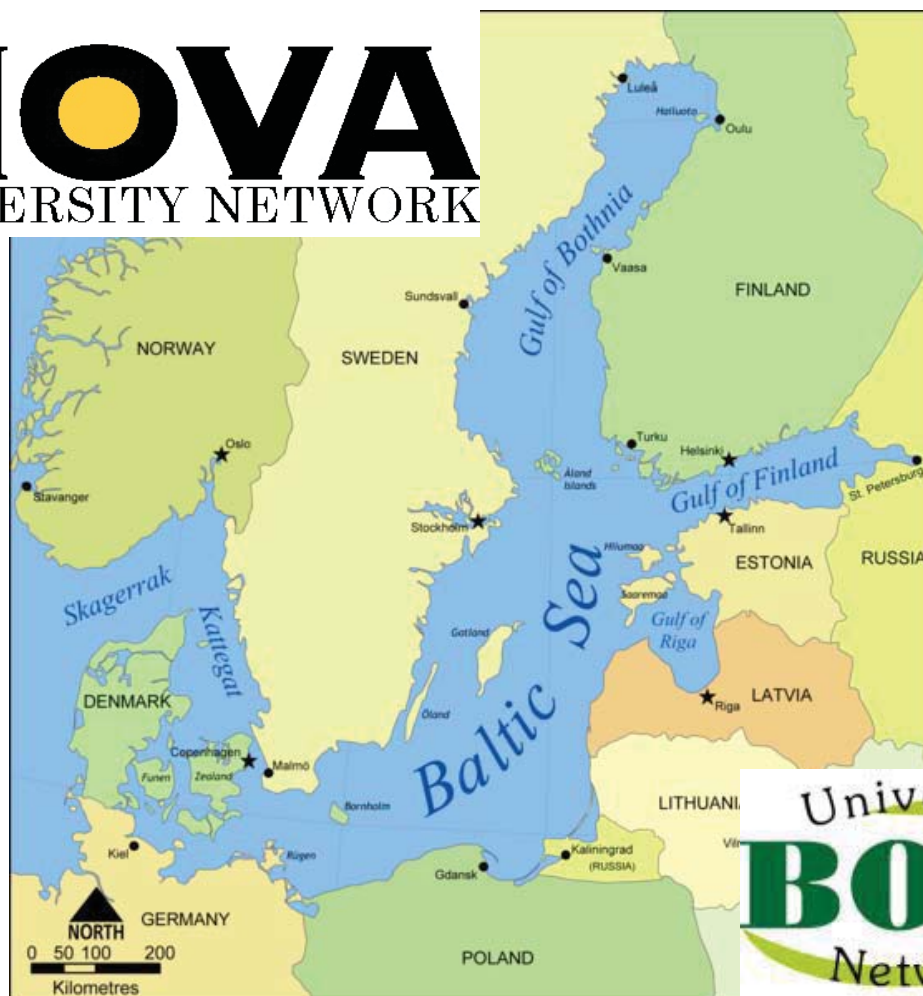


- **Challenges for Life Science universities**
- **The development of NOVA & BOVA**
- **Current activities in NOVA (& BOVA)**
- **SWOT & strategy for the networks**

## Challenges for Life Science universities in the Nordic/Baltic region

- National responsibility for professional degrees with many disciplines and low student numbers, scattered resources
- Research in fundamental - applied areas & innovation
  - funding for excellent applied research?
- New focus areas in research and teaching;
  - bioeconomy – social, economic & environmental aspects
  - sustainable biological production systems
  - food quality, nutrition & health
  - biotechnology in agriculture
  - bioenergy & green chemistry
  - animal welfare & interaction with humans
  - rural development in the south & the north

**NOVA**  
UNIVERSITY NETWORK



University  
**BOVA**  
Network

---

## **NOVA –**

### **The Nordic Forestry, Veterinary and Agricultural University Network**

---

Nine Universities / Faculties from all the Nordic countries

University of Copenhagen, Faculty of Life Sciences, Denmark	University of Aarhus, Faculty of Agricultural Sciences, Denmark
University of Helsinki, Faculty of Agriculture and Forestry, Finland	University of Helsinki, Faculty of Veterinary Medicine, Finland
University of Eastern Finland, School of Forest Sciences, Finland	Agricultural University of Iceland,, Iceland
Norwegian University of Life Sciences, Norway	Norwegian School of Veterinary Science, Norway
Swedish University of Agricultural Sciences, Sweden	

NOVA – BOVA network, BOKU November 17, 2011 – Lena Andersson-Eklund<sup>4</sup>

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## **BOVA –**

### **The Baltic Forestry, Veterinary and Agricultural University Network**

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Four Universities / Faculties from all the Baltic countries

Estonian University of Life Sciences, Tartu, Estonia	Latvia University of Agriculture, Jelgava, Latvia
Aleksandras Stulginskis University, Kaunas, Lithuania	Lithuanian University of Health Sciences - Veterinary Academy, Kaunas, Lithuania

NOVA – BOVA network, BOKU November 17, 2011 – Lena Andersson-Eklund<sup>5</sup>

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# Development of NOVA-BOVA

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- ◆ Originated from PhD-activities funded by the Nordic Council of Ministries, 1970-
- ◆ NOVA- vision of a Nordic university, 1995
  - ◆ shared responsibility for keeping up competences
  - ◆ joint programmes with mobile students & NOVA-windows for intensive courses
  - ◆ strong administrative capacity and externally funded joint projects
- ◆ NOVA-BA projects, courses for Baltic students and teachers
- ◆ Start of BOVA, project, 2001-2004
- ◆ NOVA & BOVA separate networks with collaboration, 2005-
- ◆ Rotating chairmanship, slimmed central organization but active local coordinators & joint planning in disciplinary networks

NOVA – BOVA network, BOKU November 17, 2011 – Lena Andersson-Eklund

6

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## The NOVA home page

<http://www.nova-university.org/>

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- ◆ All information on NOVA, it's organisation and activities are found on the NOVA home page
- ◆ Internal pages with minutes, budgets, annual reports, statistics on mobility etc.
- ◆ Courses are hosted in a database through an online application system, linked to the NOVA web
- ◆ Web and administration handled by the NOVA secretariat, one person full time

NOVA – BOVA network, BOKU November 17, 2011 – Lena Andersson-Eklund

7

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# Welcome to NOVA

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**NOVA**  
UNIVERSITY NETWORK

Google™ Custom Search

[CONTACT](#) [NEWS](#) [CALENDAR](#) [FACEBOOK](#)

[FOR TEACHERS](#) [FOR STUDENTS](#) [GRANTS & FUNDING](#)

---

[About NOVA](#)

[News](#)

[Grants & Funding](#)

[NOVA courses](#)

[NOVA networks](#)

[Organisation](#)

[NOVA Student Board](#)

[Contact](#)

[Guides & Checklists](#)

[Templates and forms](#)



## Welcome to NOVA!

**The Nordic Forestry, Veterinary and Agricultural University Network**



◀ OCTOBER 2011 ▶



M	T	O	T	F	L	S
26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

MSc course: Sustainable pig production 3 okt - 11 dec 2011  
The MSc course Sustainable pig production is arranged by Swedish University of Agricultural Sciences in collaboration with the NOVA universities and gives in

8

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## Finance

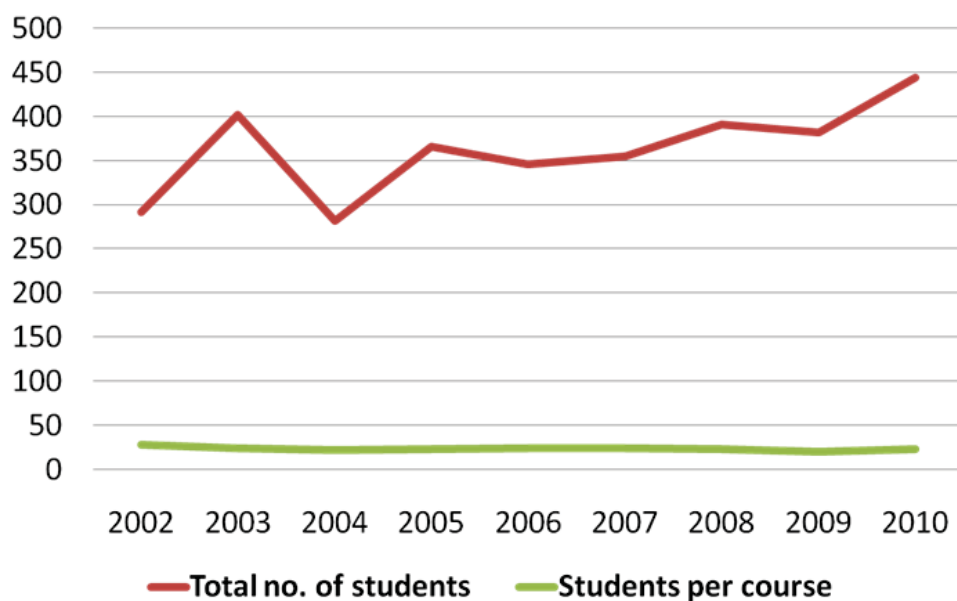
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- ◆ Financed by membership fees
- ◆ Budget set up by Rector's Board
- ◆ Budget 2011
  - ◆ 550.000 € allocated to PhD courses
  - ◆ 170.000 € allocated to planning grants, MSc courses and MSc mobility
  - ◆ External funding together with BOVA; 50.000 € for mobility + 30.000 € courses
- ◆ Committee for research and education - coordination of activities, prioritization of projects and follow-up on project reports and evaluations



# Activities, PhD level

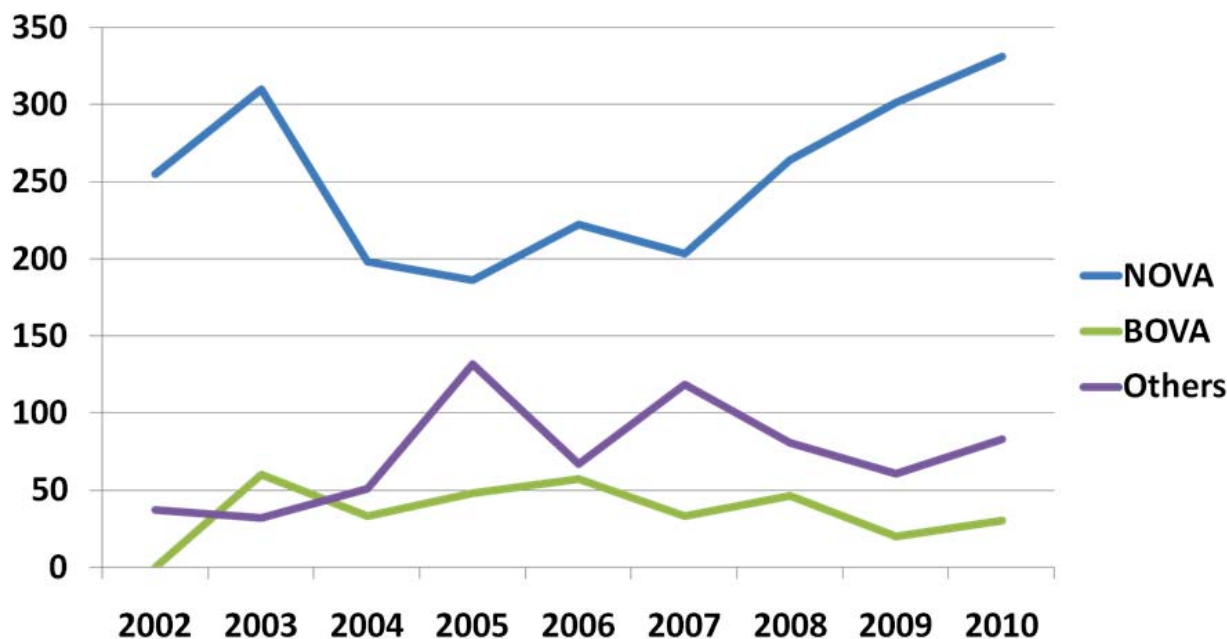
Total number of students & average student number on NOVA PhD courses, 2002-2010



NOVA – BOVA network, BOKU November 17, 2011 – Lena Andersson-Eklund<sub>10</sub>

# Activities, PhD level

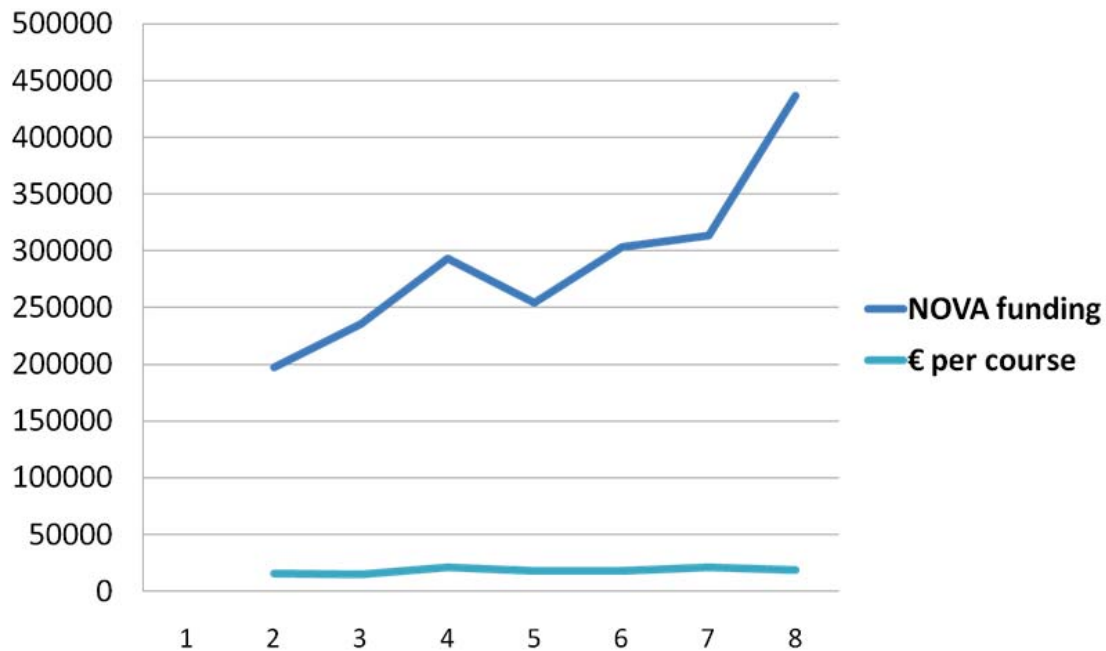
Number of students from NOVA, BOVA and other HEI



NOVA – BOVA network, BOKU November 17, 2011 – Lena Andersson-Eklund<sub>11</sub>

# Finance, PhD level

NOVA-funding of PhD courses in Euro



NOVA – BOVA network, BOKU November 17, 2011 – Lena Andersson-Eklund<sup>1</sup>

## Strengths

- solid record of activities
- well known actor
- enduring academic networks
- established functions for coordination
- joint funding base
- committed partners covering most HEI in Life Science in the countries
- fully applied Bologna system
- large proportion of education in English

## Opportunities

- increasing awareness of value of internationalization
- collaboration with BOVA and EES
- relevant priority areas in the EU strategy for the Baltic region
- developed e-learning activities

## Weaknesses

- not enough visible internally
- remaining administrative obstacles
- structural differences in MSc education
- small possibilities for mobility in professional degree study programmes

## Threats

- budgetary pressure at members
- student interest in other parts of the world
- clashes with internal units, e.g. research schools & capacity building projects
- reorganizations within member universities

NOVA – BOVA network, BOKU November 17, 2011 – Lena Andersson-Eklund

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# Mission of NOVA

## Strategic period 2011-2014

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- ◆ Support and promote life sciences in the Nordic countries by facilitating cooperation in higher education.
  - Establish networks
  - Bring together students, teachers and scientists

---

# Strategy 2011-2014

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- ◆ NOVA will **focus** its efforts within PhD and MSc education
  - ◆ create specialized PhD courses of a high international standard (30 courses/year)
  - ◆ increase course quality, diversity and student mobility within MSc education (10 short courses /year, improve possibilities for long mobility)
  - ◆ increase internal visibility
- ◆ Provide policy forums in annual seminars etc.
- ◆ BOVA prioritized as partner
  - ◆ no course fee, network partner, invitation to annual seminars, hosting courses etc.

## **The role of Vienna in the implementation of the Danube Strategy in the field of science and education**

Danube rectors conference, November 17/18.11.2011

Concept

Kurt Puchinger

1. The Vienna city administration defines itself as a service enterprise with a strong customer focus. For a metropolis such as Vienna, this not only involves providing an efficient infrastructure, but also a range of services tailored to meet the needs of the target groups in areas as diverse as business location, science, education, welfare, health, the environment and culture.
2. The general environment underlying the provision of these services is changing continuously. It is therefore essential for the Vienna City Administration to keep abreast with the latest developments in science and research.
3. We presume, that all our partners in the Danube region are in a similar situation and we are sure that they also think about different types of sustainable alliances between science, business and the city or region, about alliances which are crucial for the implementation of development procedures at the interface between the European and different governmental levels which should lead to efficient and also social inclusive governance structures.
4. In some parts of the Danube Region there is an urgent need for sustainable improvement of governance structures especially in the field of public procurement, in other parts, like e.g. in Austria, there is a need to cope with the contradiction between geographical-administrative structures and the handling of the functional system of agglomerations. Both examples can be seen as "political problems", but they are not only.
5. Knowledge is needed, specific knowledge in public law, in European law, in constitutional law, in the regulations of public financial frameworks and, I am sure, in a lot more thematic fields to prepare proposals for possible implementation processes, to prepare necessary legal innovations, to prepare and implement appropriate training courses for people working on the executive level, to prepare concepts for the involvement of all relevant stakeholders and so on. The expertise and the human potential to do all this is already available, among others. I am sure, it is available in the scientific community in each partner country and in its university-world.
6. The City of Vienna has made good experiences in the last decades coming out of the alliances between universities and city administration and we do not want to hide the results, but we want to share these experiences with our

Further comments or questions?

Please contact [Lena.Andersson-Eklund@slu.se](mailto:Lena.Andersson-Eklund@slu.se)

partners in the EUSDR, that, if you want, is the intended role of Vienna in the EUSDR.

7. You all know, that the City of Vienna took over the responsibility of PAC 10, together with Slovenia.

The pillar on "strengthening the Danube region" addresses two priority areas: 'Institution Building and Cooperation' and 'Security Issues'. The actions and projects aim at strengthening the functioning of democratic institutions, public administrations and central, regional and local level organisations, with special focus on cooperation in the region. Special emphasis is also needed on making the Danube region a safer place to live. Better political, civil and administrative structures and better security are key conditions for smart, sustainable and inclusive growth. And I will give you an example of a project, which is already in the pipeline, addressing quite these issues:

"**Danube Excellence**", is the working title of a joint project of different Universities in the region, including among others, those of Vienna, as initiator, Budapest, Maribor, and Bucharest.

One of the objectives is:

To investigate, to identify and to implement procedures, structures and technologies related to security and safety, thus enhancing and setting up, when appropriate, communication structures among security and safety related bodies, rescue institutions within communities and regions, nationwide and cross-border,

The project:

- will contribute to develop and to enhance co-operation and mutual understanding in questions and problems of public security and safety,
- will enhance and develop communication and co-operation among security and safety bodies, rescue organisations and develop communication technologies;
- will increase availability, safe operation and use of critical infrastructure like drinking water supply, flood protection and energy supply;
- will spread and develop academic education in the area,

So, this is an excellent example how the academic world can contribute to the implementation of the EUSDR.

The countries in the Danube region are characterized by different backgrounds in relation to rule of law, transparency, democracy, the market economy, and general political stability. The governments show varying degrees of decentralisation. There are different funding structures, policy mandates, political competences, territorial scopes, and different stages in their relation with the EU. There are also differences of political bargaining power and institutional capacity among the countries, among different levels of public administration and institutions and civil society, as well as between urban and rural areas.

8.

This makes bridging political divides particularly important as well as improving institutional capacity and management mechanisms at supranational level. Although accession or prospective accession to the EU has improved the situation, new systems take time to be implemented. They require changes in mentalities, building confidence amongst stakeholders and improvement of skills. Many aspects of this can best be done together by transferring knowledge and exchanging experiences, and can be done with the support of university men and women, using their knowledge and experience for upgrading other stake holders already active in the region.

9.

Activities involved could take the form of trainings and capacity building on good practices and know how covering efficient decision making, transparency requirements, information flow, consultation methods and proactive policy planning. Financial engineering, financial schemes, design and implementation of public finance reforms, project preparation, impact assessments, and implementation arrangements also need common attention. Networking activities should contribute to improve skills, competence and motivation of staff in the public sector.

10. According to my role as PAC 10 I understand my duty, together with the

members of the Steering Group, to motivate people to develop appropriate project proposals in line with the wide range of thematic issues of the EUSDR. And I promise that we will try to provide you with all necessary information and contacts if needed for a successful project development.

11. As I told you already earlier the City of Vienna can look back at some good

practices of sustainable alliances between science, business and the city and that we are willing to share these experiences with our partners implementing the EUSDR in the next ten years. To build such alliances is not so easy as it looks and maybe it takes some time, but Rectors can play a leading role in orienting or reorienting their institutions for catching up the opportunities the EUSDR is offering, for the benefit of a fair and social inclusive, growth oriented development of the Danube Region, serving our people.

# Visions for the Future of Humanities in the Danube Region

Univ.-Prof. Dr. Verena Winiwarter  
Alpen Adria Universität Klagenfurt, IFF  
Campus Vienna



1. The role of the Humanities for the future of the Danube Region.
2. The Humanities of the Future and their role for the Danube Region.





## Recognition of Humanities' Role in a knowledge-based economy



'These disciplines [humanities and social sciences] provide the **organisational, management, legal, accounting and marketing knowledge bases** that are critical to successful innovation. They **are the source of many of our insights into the human condition broadly**, and to our **understanding and managing the consequences of moving to a knowledge-based economy**'.

*AAH (The Australian Academy of the Humanities), The Humanities and Australia's National Research Priorities, Report prepared for DEST (Dept. of Education, Science and Training), April 2003.*

3



2 Humanities

**2.1 History**

**2.2 Languages and linguistics**

**2.3 Literature**

**2.4 Performing arts**

**2.5 Philosophy**

**2.6 Religion**

**2.7 Visual arts**

[http://en.wikipedia.org/wiki/List\\_of\\_academic\\_disciplines](http://en.wikipedia.org/wiki/List_of_academic_disciplines)

3 Social sciences

3.1 **Anthropology**

3.2 **Archaeology**

3.3 **Area studies**

3.4 **Cultural and ethnic studies**

3.5 Economics

3.6 Gender and sexuality studies

3.7 **Geography**

3.8 Political science

3.9 Psychology

3.10 Sociology

4



## 1 Humanities fields

## 1.1 Classics

## 1.2 History

## 1.3 Languages

## 1.4 Law

## 1.5 Literature

## 1.6 Performing arts

## 1.6.1 Music

## 1.6.2 Theatre

## 1.6.3 Dance

## 1.7 Philosophy

## 1.8 Religion

## 1.9 Visual arts

## 1.9.1 History of visual arts

## 1.9.2 Media types

## 1.9.2.1 Drawing

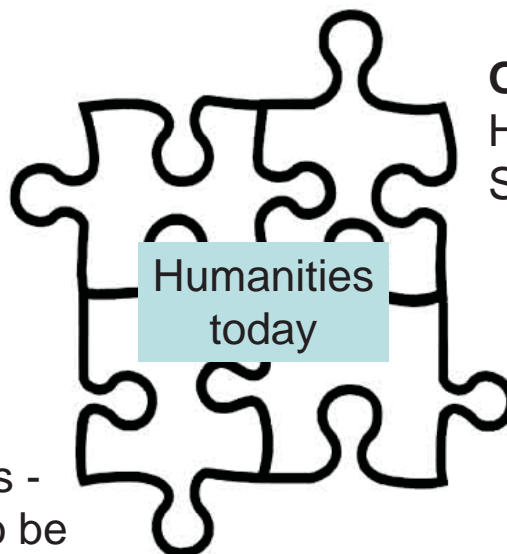
## 1.9.2.2 Painting

<http://en.wikipedia.org/wiki/Humanities>

## Humanities' roles

**Rememberance:**

Understanding of our legacy – where we have come from

**Orientation:**

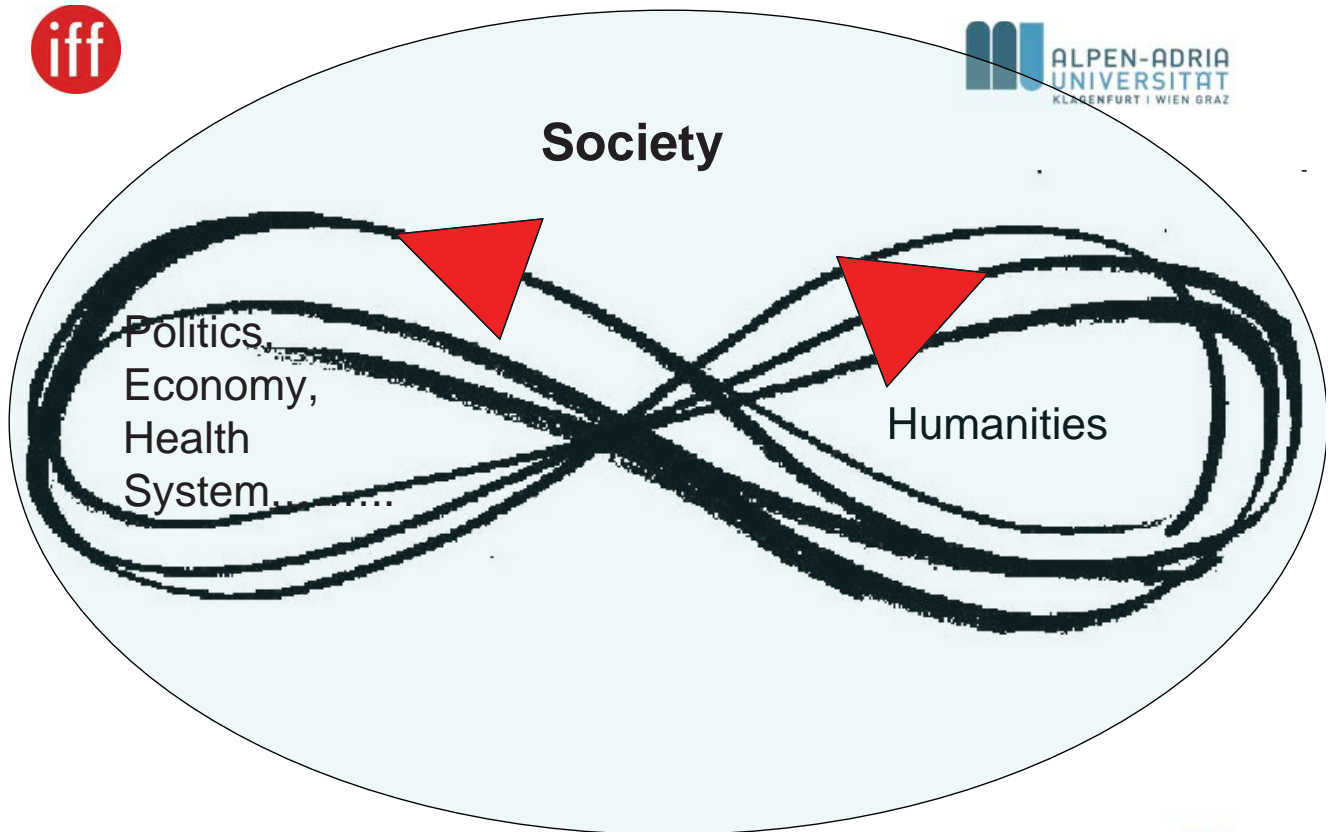
Humans in Society

**Regulation:**

Setting norms - what ought to be

**Observation and Reflection:**

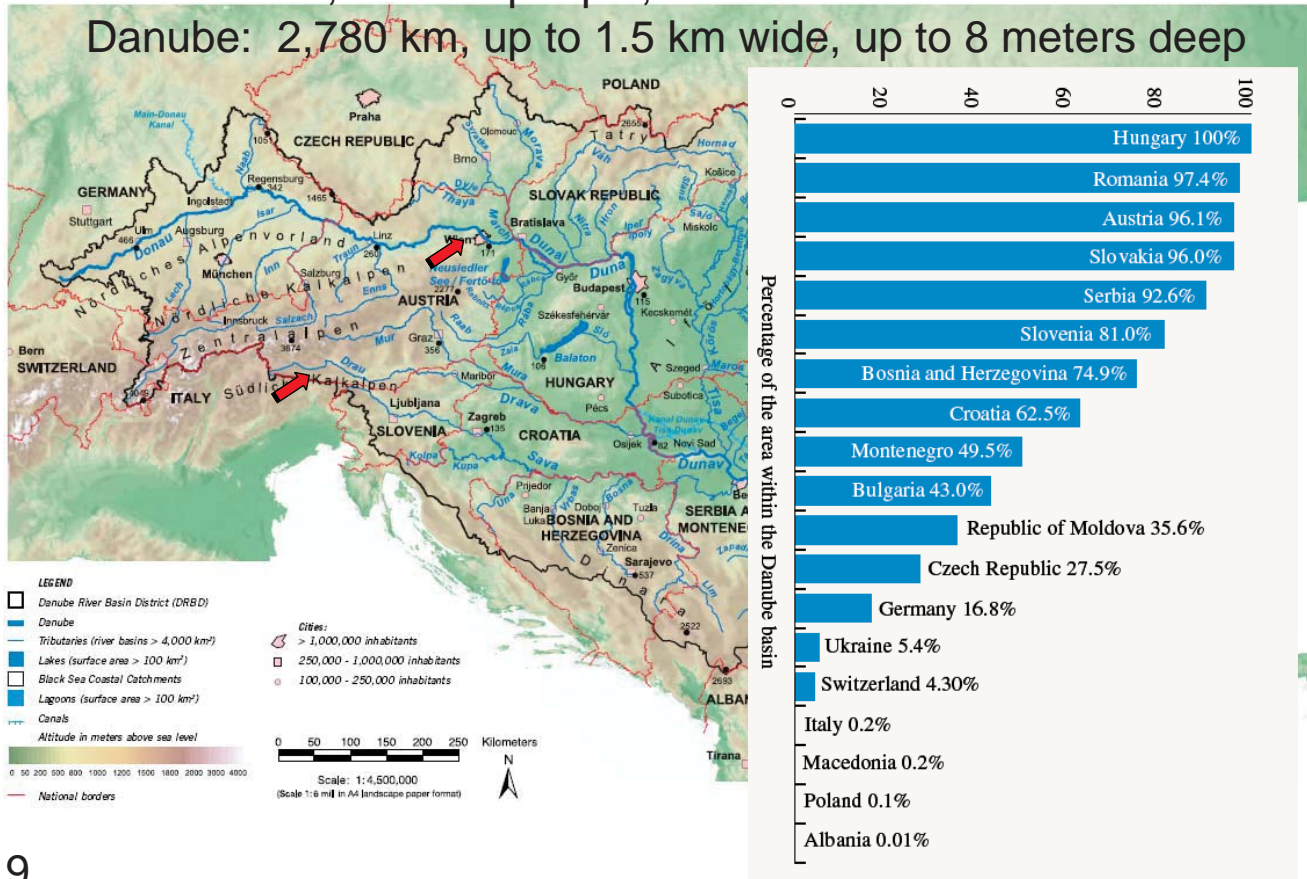
Epistemology and Critique



## Special features of the Danube Region

19 countries, 81 Mio. people, ca. 800.000 km<sup>2</sup>

Danube: 2,780 km, up to 1.5 km wide, up to 8 meters deep



9



DEHI  
DANUBE ENVIRONMENTAL HISTORY INITIATIVE

**DONAU**  
**DANUVIUS**  
**DĀNU**  
**TUNA**  
**DUNAJ**  
**ДУНАВ**  
**DUNA**  
**ДУНАЙ**  
**ISTROS**  
**DONAVA**  
**DUNAV**  
**DUNAREA**  
**DUNÁ**  
بونارد

work on other major rivers in Europe and beyond.  
If you would like to join DEHI, please visit our website to get in touch.

Ecosystem Management, University of Natural Resources and Applied Life Sciences Vienna  
Utho: Design Department, Pictures: Österreich Werbung, Art direction: ursula.wieswetter.at, Graphics: Tom Mraz

<http://umweltgeschichte.uni-klu.ac.at/dehi>

ALPEN-ADRIA UNIVERSITÄT KLASSENFÜR ERZGEBIRGE | WIEN  
EUROPEAN SCIENCE FOUNDATION  
BOKU

<http://umweltgeschichte.uni-klu.ac.at/dehi>

81 Million people communicate through 20 different languages. At least 17 are official national languages. Parts of the population speak other languages of the Danube basin as their mother tongue. This is due to the eventful history of the Danube basin and is an important common feature of all countries of the Danube basin.

10



... the Danube Region Strategy will serve the goal of increasing prosperity, security and peace for the peoples living there, especially through **enhancing cross-border, trans-regional and trans-national cooperation and coordination**; (Danube Strategy, 2010)

What are the prerequisites for **enhancing cross-border, trans-regional and trans-national cooperation and coordination** ?

- The ability to **communicate across borders of language and tradition.**
- The ability to **overcome the legacies of conflict and war.**
- The ability to engage in **joint construction of a common future based on democratic governance.**

**Rememberance – Orientation – Regulation - Reflexion**

All **languages** represent a **distinct point of view** on the world, characterized by its **own meaning and values**.

### **Litost** (*Czech*)

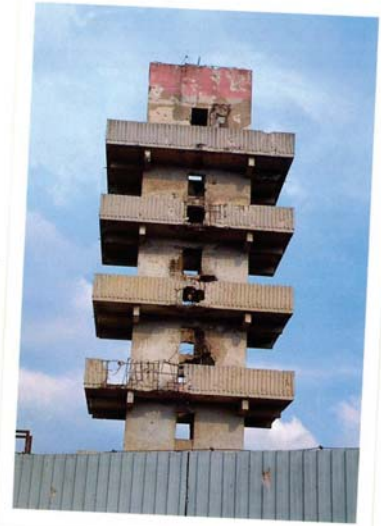
The closest definition is a state of agony and torment created by the sudden sight of one's own misery.

### **Wabi-Sabi** (*Japanese*)

A way of living that focuses on finding beauty within the imperfections of life and accepting peacefully the natural cycle of growth and decay.



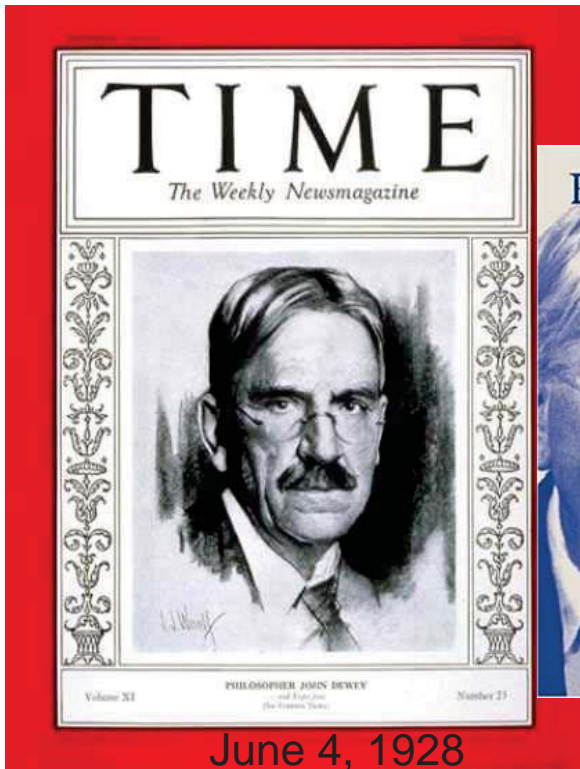




## Coping with the legacy of war

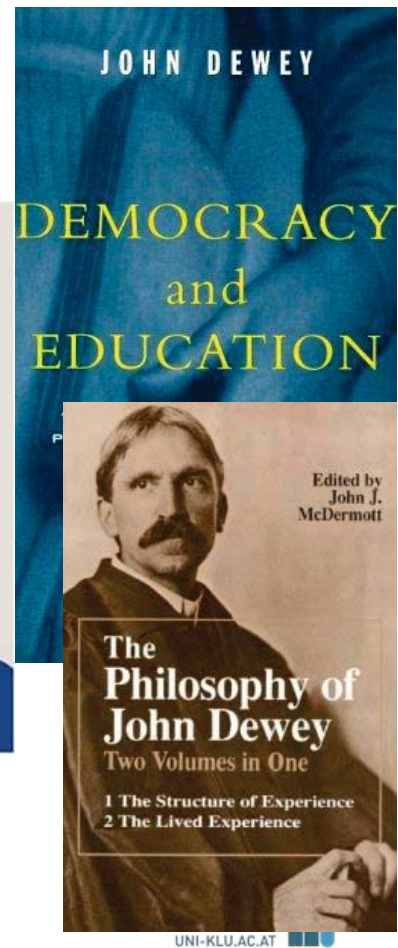
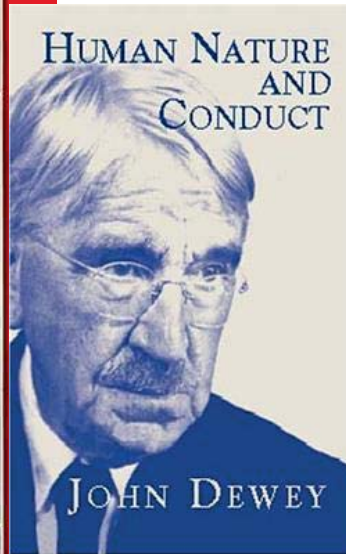


History may not repeat itself, but it does rhyme a lot.  
- Mark Twain



June 4, 1928

JOHN DEWEY (1859-1952)  
father of educational philosophy



17



## Culture as Orientation



A civilization's **culture** is the **house of meaning** - it is what gives human beings their **sense** of living in a world organized by meanings and values, **a world that makes sense** and **provides fulfilling goals for action**.

**Cultures** are **ways of inhabiting and adjusting to the world** and the conditions of life.

Our **first task** must be to understand **how a culture's symbols create a life**; beyond that, we must inquire into the kinds of lives it makes possible and its **adaptability to coexistence with other kinds**.

18 After Alexander, 1995



## Fostering democracy through the Humanities (after Dewey)



Democracy cannot merely "tolerate" diversity; it alone of all forms of civilization **requires** diversity.

Thus there is an initial need to **encounter difference meaningfully**.

We must be able to **employ a complex understanding** of the world and its traditions to contextualize the diversity we encounter.

Democracy is predicated on the **perpetual possibility of communication**.



## Educating for a democratic culture



Democratic culture must recognize common ideals.

Democratic culture must offer a wide, flexible range of points of contact with other groups, enabling cooperation and communication.

A democratic society must have a type of education which gives individuals a personal interest in social relationships and control, and the habits of mind which secure social changes without introducing disorder.

Democratic culture consciously aims at providing as many people as possible the materials and arts whereby they can construct meaningful lives.

## 2. The Humanities of the Future and their role for the Danube Region.



## Danube Strategy 2010

### Strategic policy areas

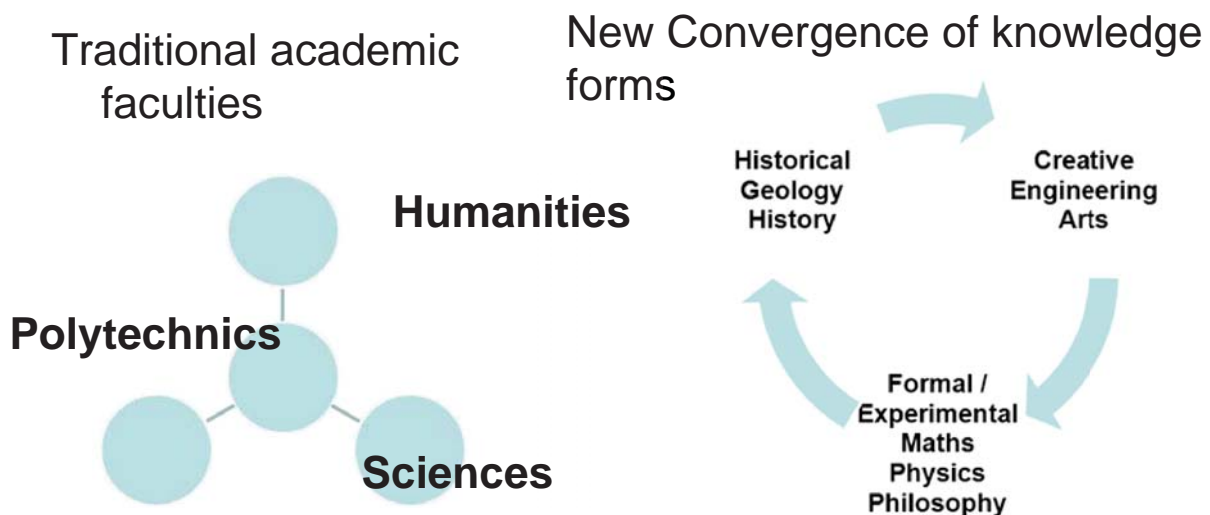
- Energy
- Environmental and nature protection
- Transport and infrastructure
- Professional training and innovation
- Arts and cultural activities
- as well as
- Sustainable economic activity and tourism
- Food security/safety
- Economy
- SME cooperation
- R+D
- Migration
- Governance
- Sport
- Education and culture
- Labour
- Health and social affairs



# What can the humanities contribute to these policy areas?

**„Basic research should be understood as covering all fields, including the social sciences and humanities, putting special emphasis on interdisciplinarity.“**

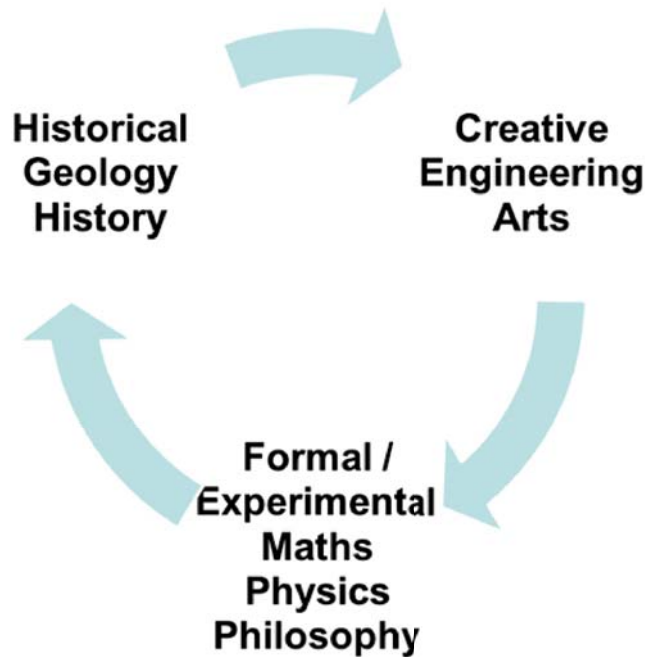
REPORT on Science and technology- Guidelines for future European Union policy to support research (2004/2150(INI)), Committee on Industry, Research and Energy  
 Rapporteur: Pia Elda Locatelli („Locatelli Report“), 2/2005



From: EH presentation by Poul Holm, May 2005



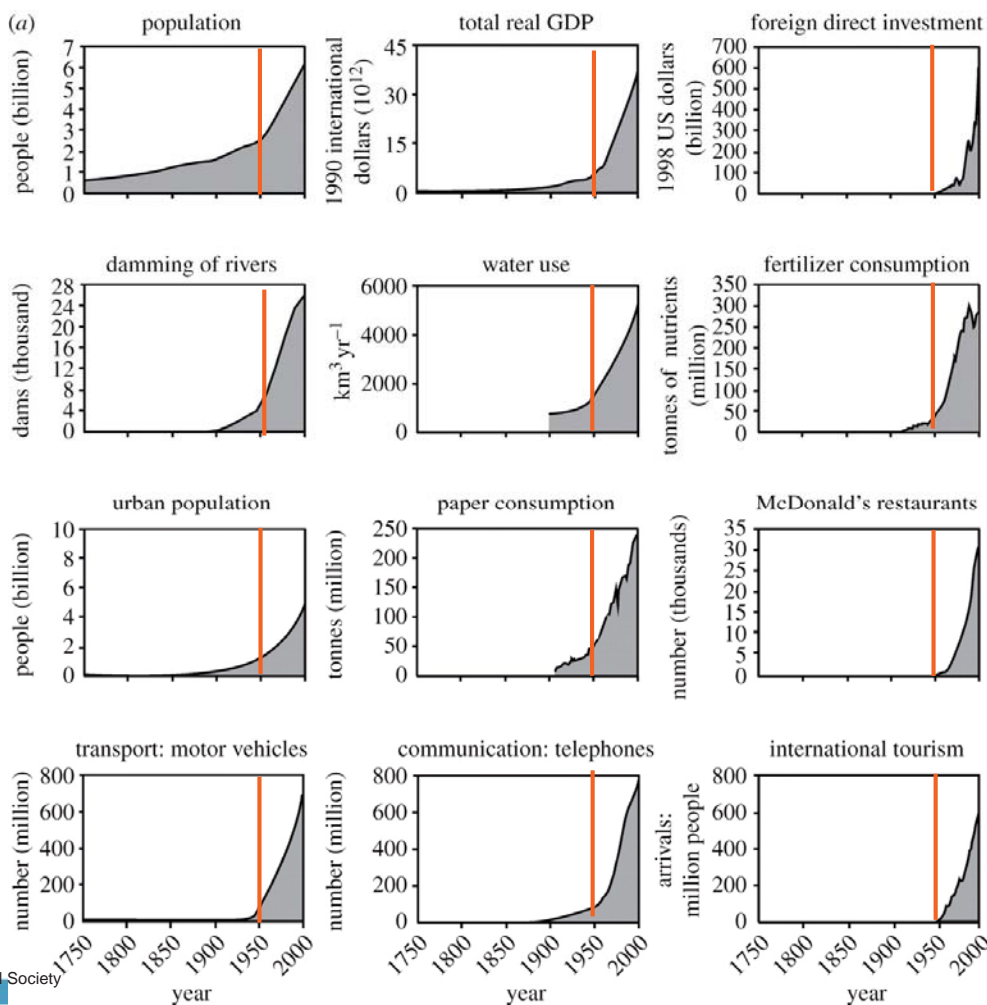
# Interdisciplinary Environmental Research



25



Danube Rector's Conference BOKU Vienna, Nov 17-18, 2011



Steffen W et al. Phil. Trans. R. Soc. A 2011;369:842-867

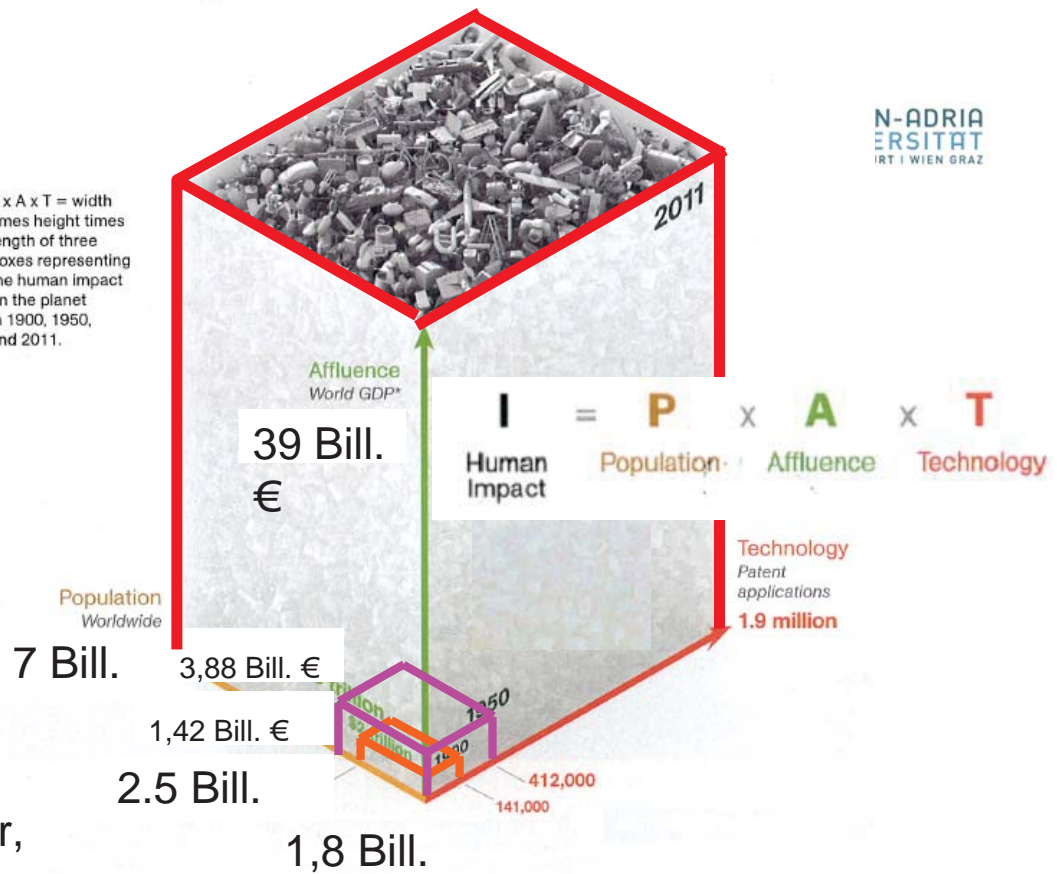
26

©2011 by The Royal Society





$P \times A \times T$  = width  
times height times  
length of three  
boxes representing  
the human impact  
on the planet  
in 1900, 1950,  
and 2011.



\*GDP FIGURES ARE CONSTANT 1990 INTERNATIONAL DOLLARS.  
JOHN TOMANIC, NGM STAFF. ART: BRYAN CHRISTIE. SOURCES: UNITED NATIONS; ANGUS MADDISON, "STATISTICS ON WORLD POPULATION, GDP AND PER CAPITA GDP, 1-2008 AD," UNIVERSITY OF GRONINGEN; WORLD BANK; WORLD INTELLECTUAL PROPERTY ORGANIZATION

## Environmental Challenges in the DRB

- **Hydromorphological change** and resulting ecological pressures.
- **Demise of fisheries** due to pollution, weirs and other riverine infrastructures.
- Floods

**DRIVERS/Conflicts:** Industry, Agriculture, Transportation, Navigation; Energy provision (Carbon Neutral); Nature Conservation, Urbanisation

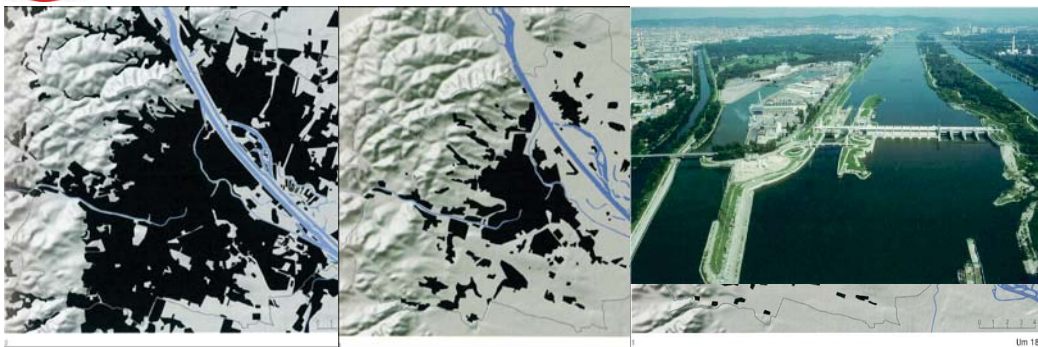


# Environmental history of river basins



- Interaction between **humans and dynamic, complex, moving ecosystems** dependent on climate, morphology, soils, plants (both aquatic and terrestrial), animals (fish, mammals, mollusks, bivalves) and **micro-organisms, changed by structures** (weirs, power plants) and processes (pollution, overfishing).
- Interactions are **non-linear, with time-lags, threshold effects and feedbacks.**

29



2000

1890

1850

Brunner/Schneider 2005, Wien Umwelt



1730

1683

1550



30 Niklas Meldeman, Nürnberg 1530 (Detail)



- Older ARRANGEMENTS (such as rectification works) influence younger ones.
- This changes the realm of possible actions for humans.
- → Older arrangements influence the practices of humans today.
- We call this **socio-ecological legacies**.
- Note the **IRREVERSIBILITY** of interventions!



## Environmental history of river basins

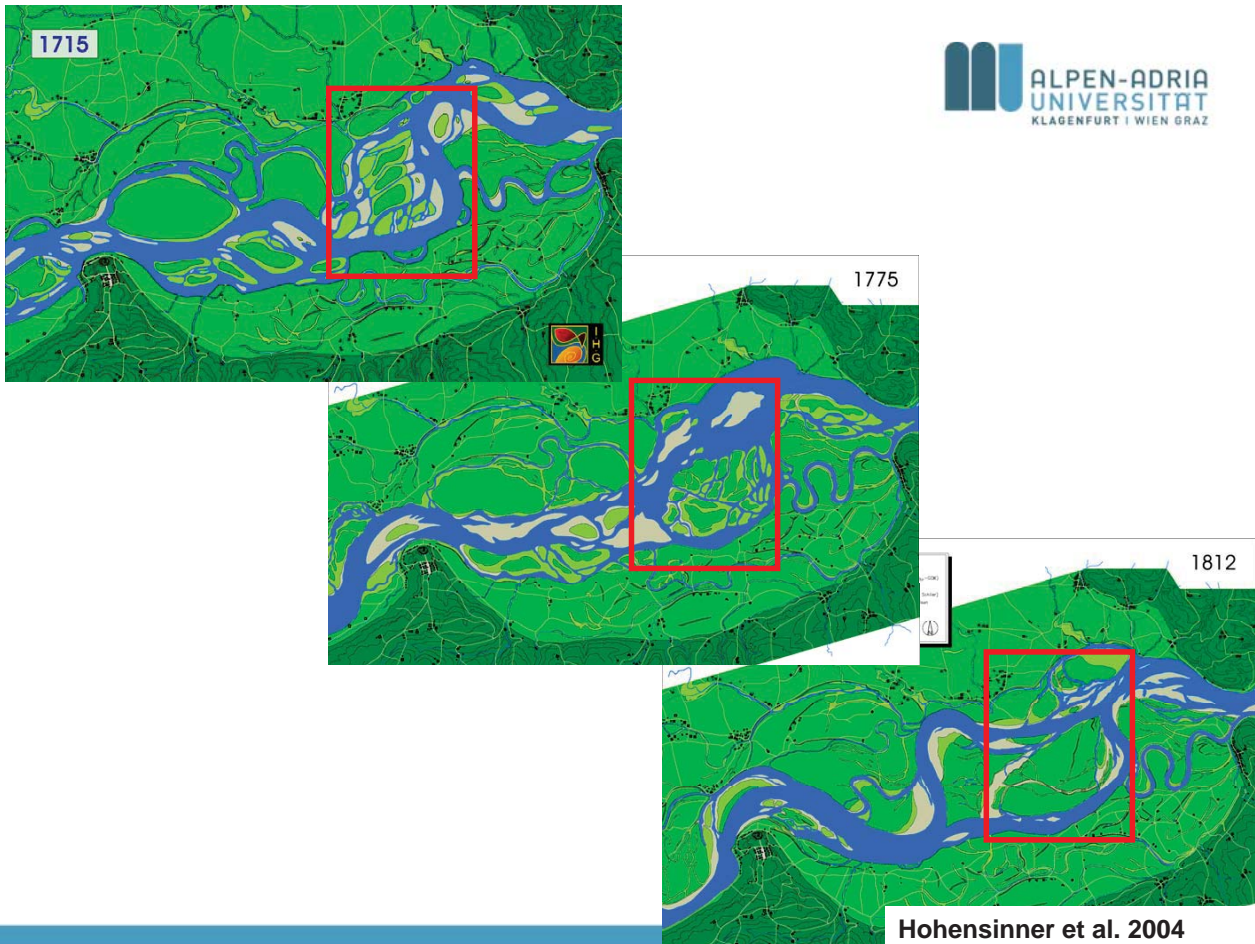
- A history of **legacies** and **side-effects**, unwanted consequences of interventions.
- A history which might allow us to learn about **sustainable practices** accepting „the flow of the river“, that is, natural dynamics.
- Study of humans **AND** study of ecosystems is of the same importance, because we want to understand their **co-evolutionary development**.



# The Danube Machland and its dynamic history



Hohensinner 2008



# The VISION

Both the disciplinary humanities as we  
know them  
AND  
the new, interdisciplinary humanities of  
the future  
contribute to the development of the  
Danube Region

Democracy needs sustainable  
development.  
In an ecologically degraded  
world, long-term economic  
development is impossible and  
social unrest will increase.

To develop the Danube River Basin Region according to the Danube Strategy, the traditional and the new interdisciplinary humanities, e.g. the environmental humanities are needed.



Thank you for your attention!

**DEHI**

DANUBE ENVIRONMENTAL HISTORY INITIATIVE

<http://umweltgeschichte.uni-klu.ac.at/dehi>

[martin.schmid@uni-klu.ac.at](mailto:martin.schmid@uni-klu.ac.at)

[verena.winiwarter@uni-klu.ac.at](mailto:verena.winiwarter@uni-klu.ac.at)



# The Christian-Doppler-Laboratory for Advanced Methods in River Monitoring, Modelling and Engineering and related ideas for the common implementation of the Danube Strategy

**Helmut Habersack**

Christian Doppler Laboratory for Advanced Methods in River Monitoring,  
Modelling and Engineering,  
Institute of Water Management, Hydrology and Hydraulic Engineering,  
Department of Water, Atmosphere and  
Environment, BOKU – University of Natural Resources and Life  
Sciences, Vienna

## Contents

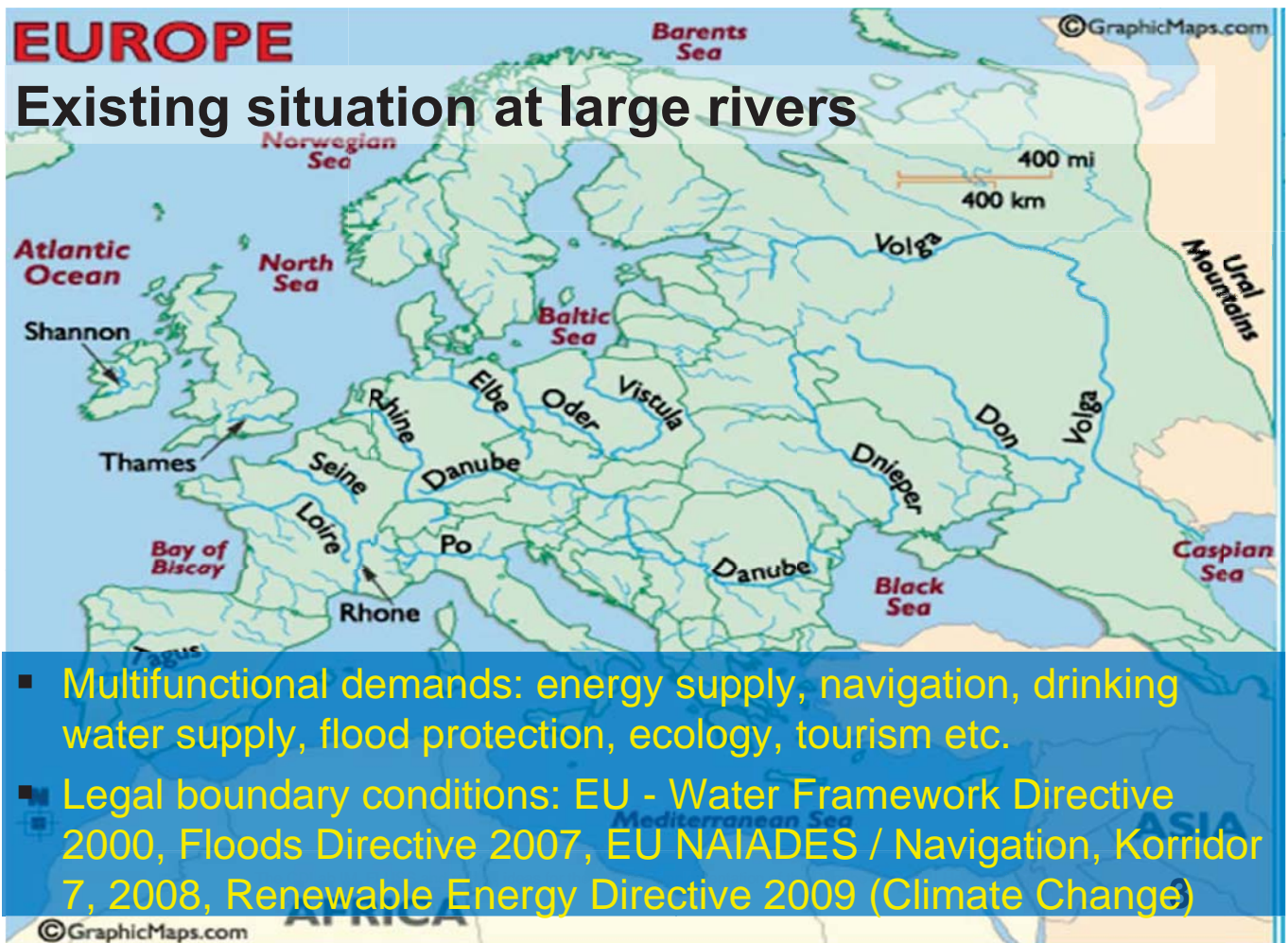


University of Natural Resources and  
Life Sciences Vienna,  
Department of Water, Atmosphere  
and Environment

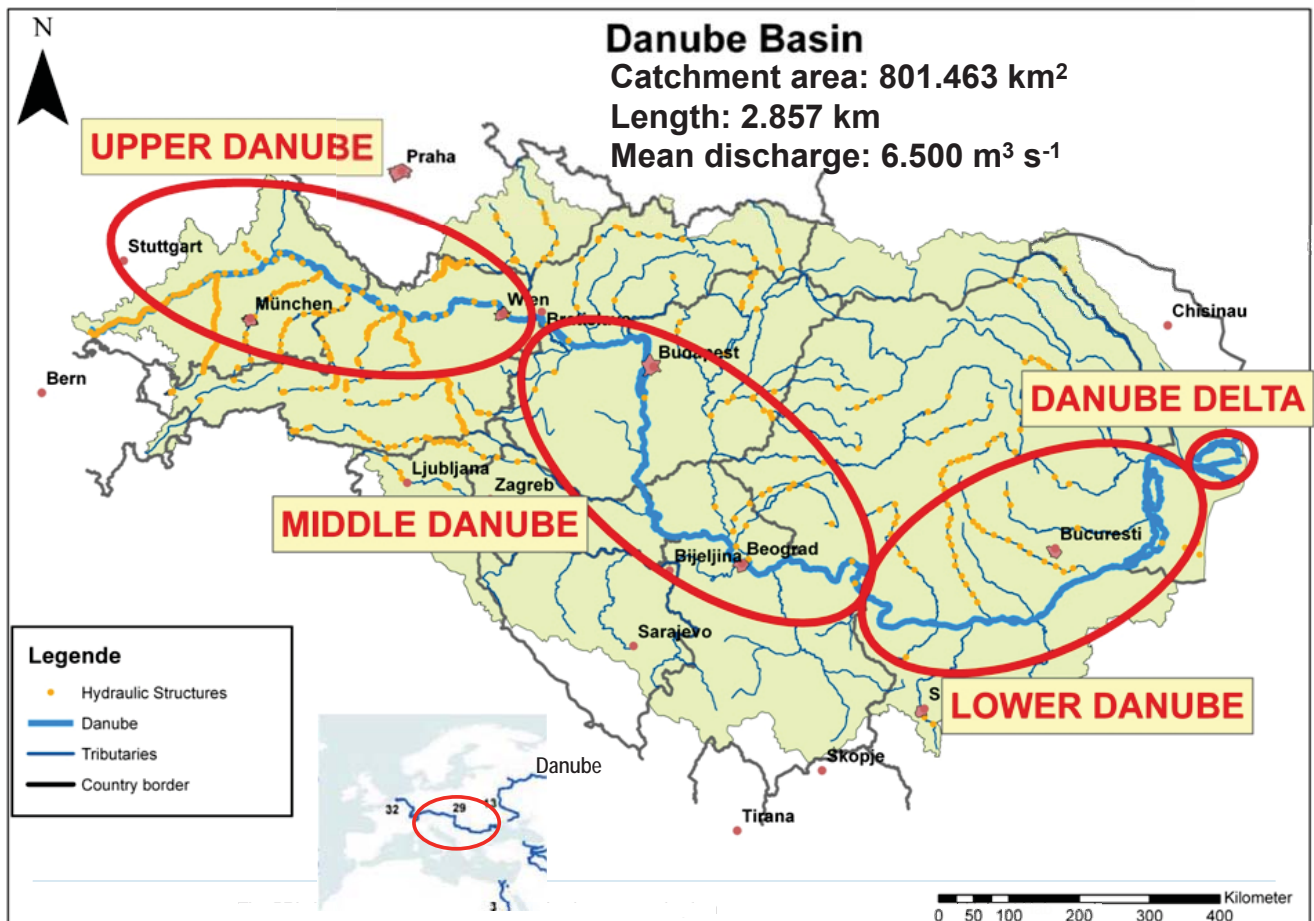
1. Introduction
2. Danube River – pressures and impacts
3. The CD Laboratory for Advanced Methods in River Monitoring, Modelling and Engineering
4. Ideas for the common implementation of the Danube Strategy

# EUROPE

## Existing situation at large rivers



- Multifunctional demands: energy supply, navigation, drinking water supply, flood protection, ecology, tourism etc.
- Legal boundary conditions: EU - Water Framework Directive 2000, Floods Directive 2007, EU NAIADES / Navigation, Korridor 7, 2008, Renewable Energy Directive 2009 (Climate Change)



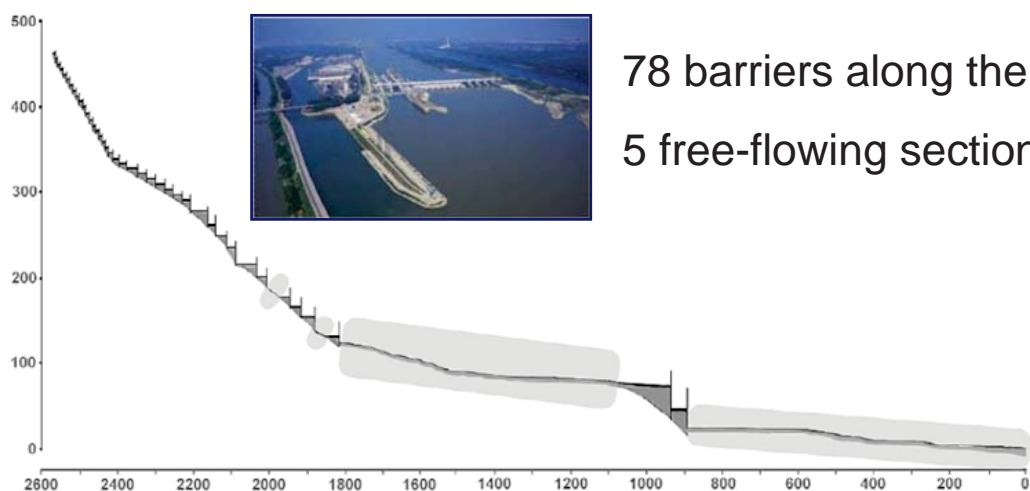
# Existing Situation

## Driving forces and impacts – Danube River Basin

- Hydropower plants
- Flood protection
- Navigation
- Climate change
- Changes in land use
- Point and diffuse source pollution

# Hydroelectric Energy

## Danube River Basin – Hydropower



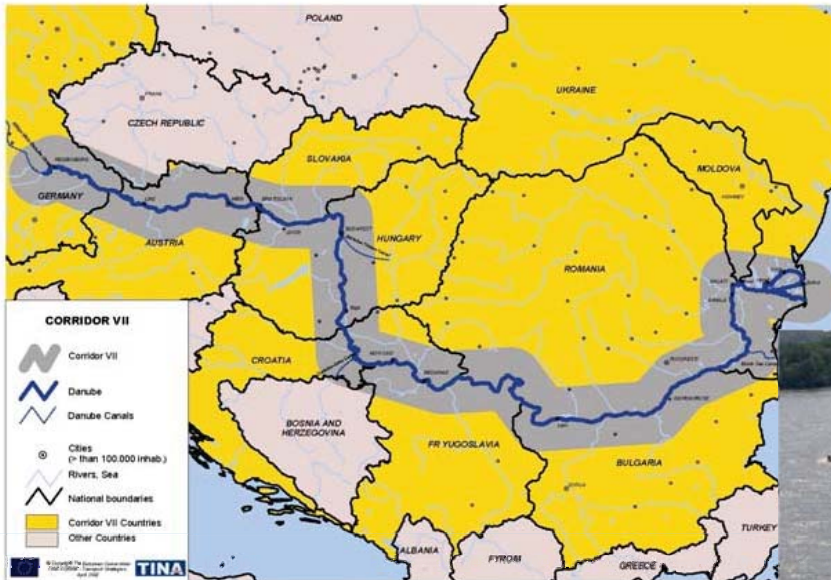
78 barriers along the Danube  
5 free-flowing sections

Schiemer et al., 2004



# International Waterway

## Danube River Basin - Navigation



2411 km navigable (Sulina-Kelheim)

Waterway transport in the Danube aims to be increased from 10 mio to 30 mio t / year (e.g. in Austria)

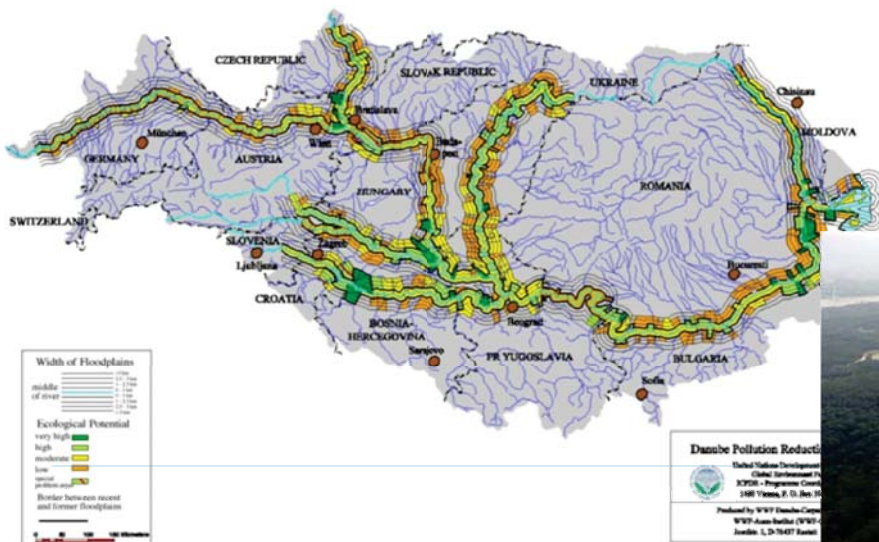


via donau, 2007

# Flood Risk Management

## Danube River Basin – Flood protection

### Ecological potential of floodplains in the Danube River Basin



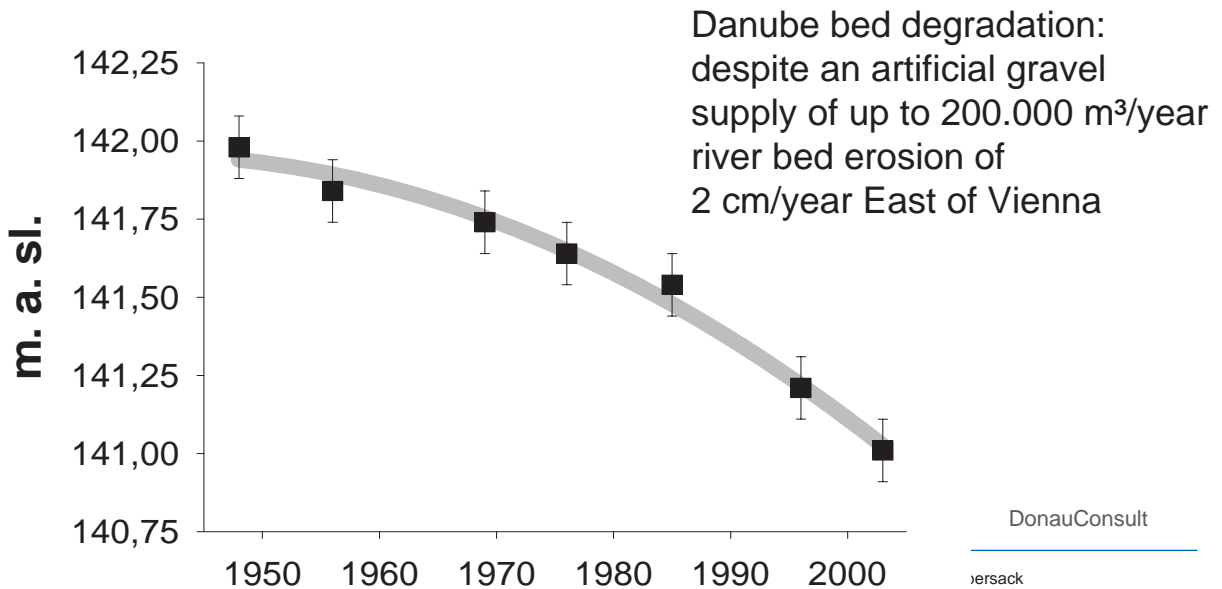
Loss of 80 % of the original floodplain area



Danube Pollution Reduction  
United Nations Development  
Global Environment Facility  
ICPDR - Programme Council  
1400 Vienna, P. O. Box 10  
Produced by WFP Danube Centre  
WFP-Asian Institute of Technology  
Bangkok, 12/20/07

# River Bed Degradation

## Upper Danube - Consequences

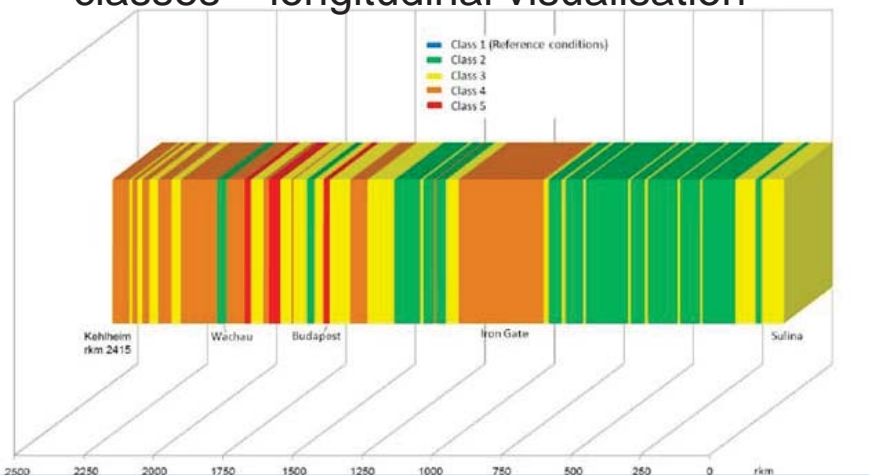


18. 11

# River Morphology

## Hydromorphological conditions

Overall total hydromorphological assessment in five classes – longitudinal visualisation



1/3 good hydromorphological conditions

1/3 strongly altered

Upper Danube - most affected by significant hydromorphological changes

ICPDR, JDS, 2008



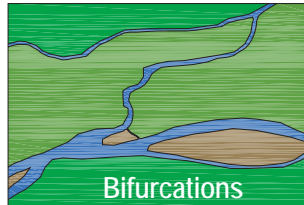
# Lower Danube



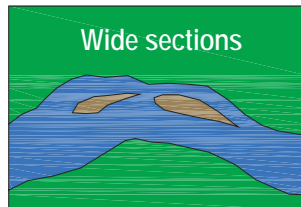
## Hydromorphological situation

Originally partially anastomosing morphology, sandbed river

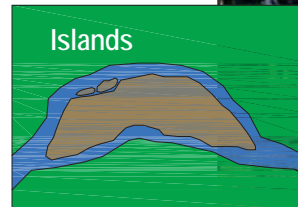
Actual situation:



Bifurcations



Wide sections



Islands

Island development



Belene Island



Cama Dinu



Side / bank erosion



Number of islands increased from 93 (1934) to 135 (1992)

Bondar & Teodor, 2008

Habersack et al., 2010

## The CD-Laboratory for Advanced Methods in River Monitoring, Modelling and Engineering

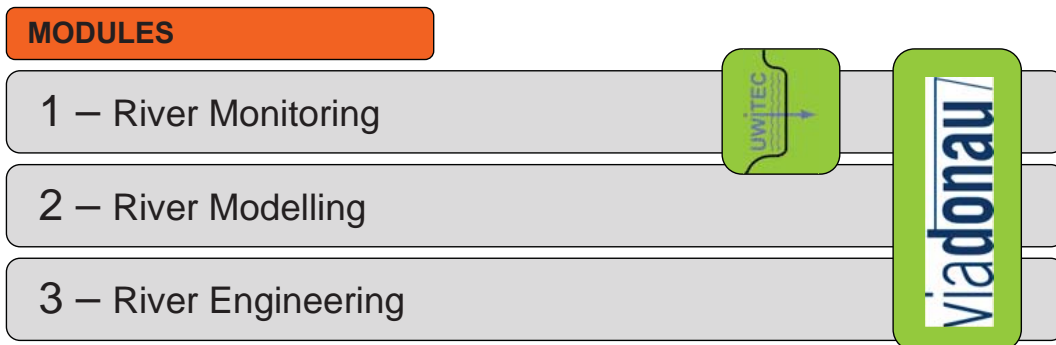
### Aims

- Development of **innovative methods** for the improvement of river monitoring (shear stress, sediment transport, morphodynamics etc.)
- Development and programming of **numerical models** (3D hydrodynamics, sediment transport and habitat modelling)
- Development and optimisation of **river engineering measures** to minimize river bed degradation, improve navigation, flood protection and ecology

# Overview of modules



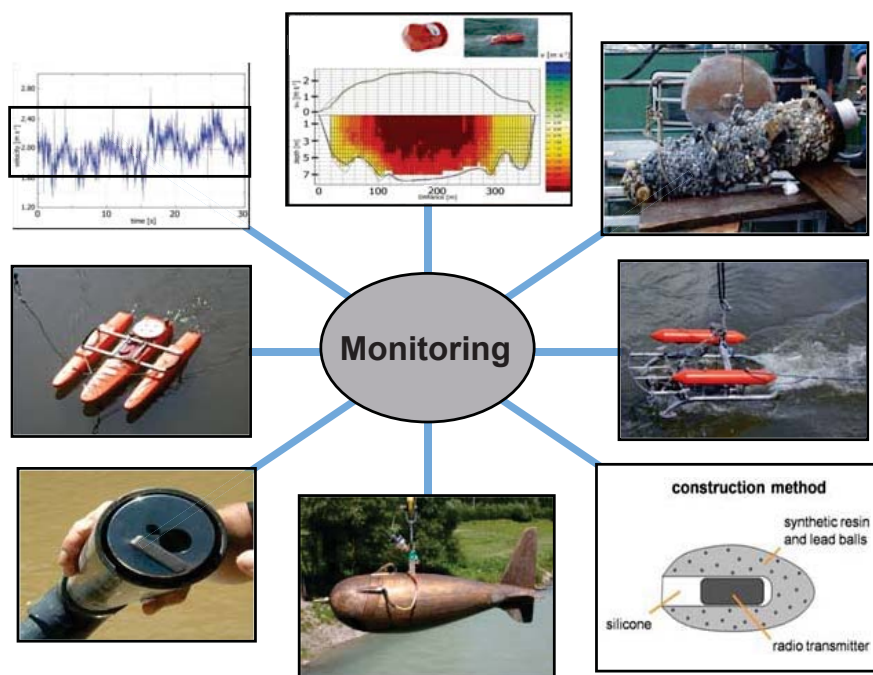
University of Natural Resources and Life Sciences Vienna, Department of Water, Atmosphere and Environment



# River Monitoring



University of Natural Resources and Life Sciences Vienna, Department of Water, Atmosphere and Environment



Habersack, H.M, Nachtnebel, H.-P, Laronne, J. B. (2001), *J. Hydraulic Research*, Vol. 39/2, 125-133.

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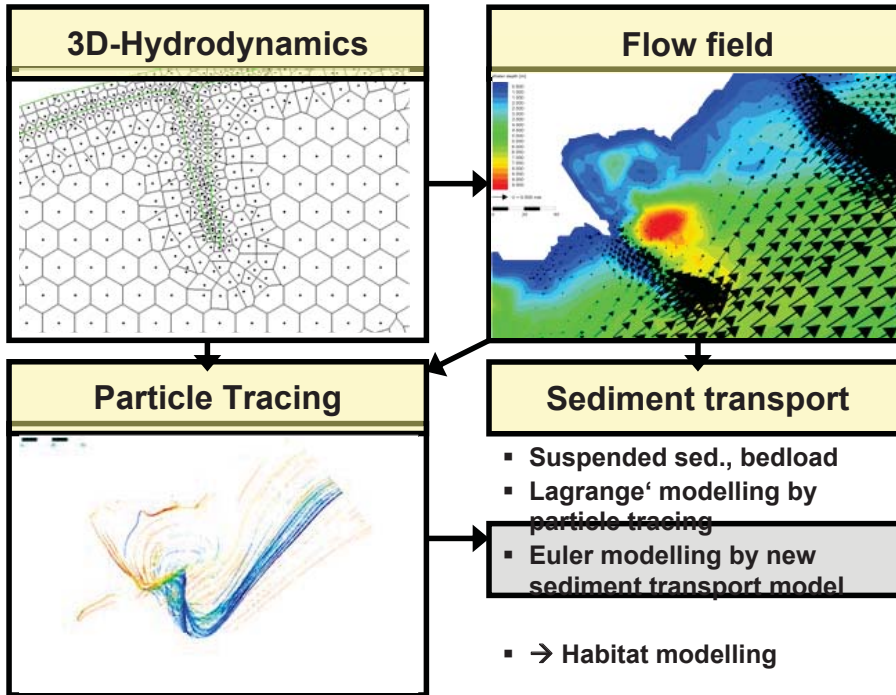
Habersack, H.M. & Laronne, J.B. (2001), *Water Resources Research*, Vol. 37, No. 12, 3359-3370.

Habersack, H., Hauer, C., Liedermann, M., Tritthart, M., (2008), *Water 21*: 29-31.

Smart, G.M., Habersack, H.M. (2007), *J. Hydraulic Research*, Vol: 45 / Issue: 5, 661-673.

Habersack, H.M., Seitz, H., Laronne, J.B. (2008), *J. Geodinamica Acta*, 21/1-2, 67-79.

# River Modelling



University of Natural Resources and Life Sciences Vienna, Department of Water, Atmosphere and Environment

Tritthart, M., Gutknecht, D., (2007), *Engineering Applications of Computational Fluid Mechanics*, 1: 1-14.

Habersack, H., Hauer, C., Liedermann, M., Tritthart, M., (2008), *Water 21*: 29-31.

Tritthart, M., Liedermann, M., Habersack, H., (2009), *River Research and Applications*, 25: 62-81.

Krapesch, G., Tritthart, M., Habersack, H., (2009), *River Research and Applications*, 25: 593-606.

Hauer, C., Unfer, G., Schmutz S., Habersack, H. (2008), *Environ Manage*, 42:279-296.

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18. 11. 2011

The CDLab IM\_FLUSS and related ideas for the common implementation of the Danube Strategy | Helmut Habersack

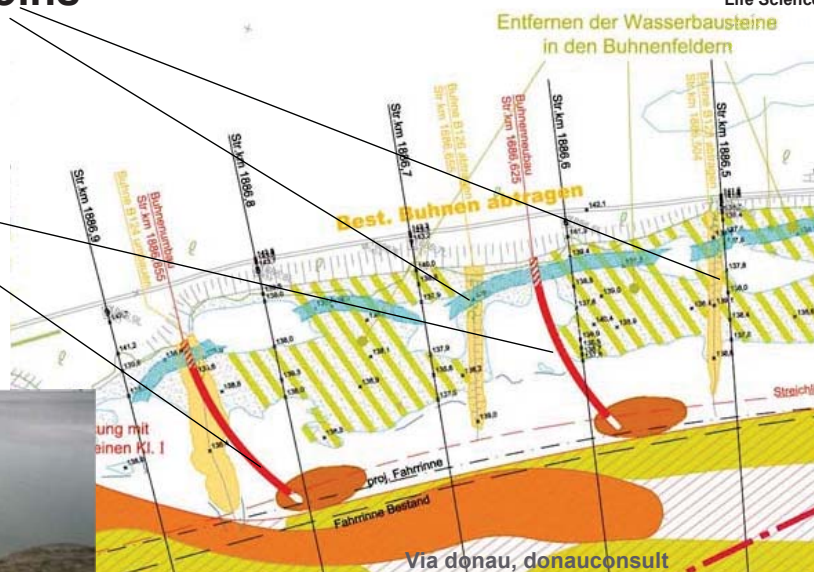
# River Engineering



University of Natural Resources and Life Sciences Vienna, Department of Water, Atmosphere and Environment

Existing groins

Modified groins



and related ideas for the common implementation of the Danube Strategy | Helmut Habersack



# Ideas for Danube Strategy (1)

## (1) Connecting the Danube Region

To improve mobility and multimodality

- (a) Inland Waterways
- (b) Road, rail and air links

To encourage more sustainable energy

To promote culture and tourism, people to people contacts

## (2) Protecting the Environment in the Danube Region

To restore and maintain the quality of waters

To manage environmental risks

To preserve biodiversity, landscapes and the quality of air and soils

## (3) Building Prosperity in the Danube Region

To develop the knowledge society through research, education and information technologies

To support the competitiveness of enterprises, including cluster development

To invest in people and skills

## (4) Strengthening the Danube Region

To step up institutional capacity and cooperation

To work together to promote security and tackle organised and serious crime



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To work together to promote security and tackle organised and serious crime



## Ideas for Danube Strategy (2) Research Infrastructure Needs



University of Natural Resources and  
Life Sciences Vienna,  
Department of Water, Atmosphere  
and Environment

- **two large hydraulic and environmental engineering laboratories:** one in the upper/middle part of the Danube (Responsible River Modelling Center RRMC) and one in the lower part (Hydraulic Engineering Lab); the reason for two labs (upstream/downstream): gravel bed vs sand bed river, up to ten times slope difference and different problem areas
- **cluster/network of river engineering simulation tools** to be used by Danube countries (common software development and implementation), being applied both on computer clusters and individual servers

## Ideas for Danube Strategy (3) Research Infrastructure Needs



University of Natural Resources and  
Life Sciences Vienna,  
Department of Water, Atmosphere  
and Environment

- **Network of field study sites along the Danube River** (each country should nominate a certain river stretch, specific problem area, work program etc.) for process analysis, model calibration and validation AND test of advanced river engineering solutions (examples, to be commonly agreed on: Austria: National Park Donauauen, Slovakia: Reservoir Gabcikovo, Hungary: Mosoni Danube, Serbia, Croatia: Kopacki Rit, Romania, Bulgaria: border section).
- **Research diving shaft for the whole Danube** (e.g. operated by Serbia)



# Ideas for Danube Strategy (4) Research Infrastructure Needs



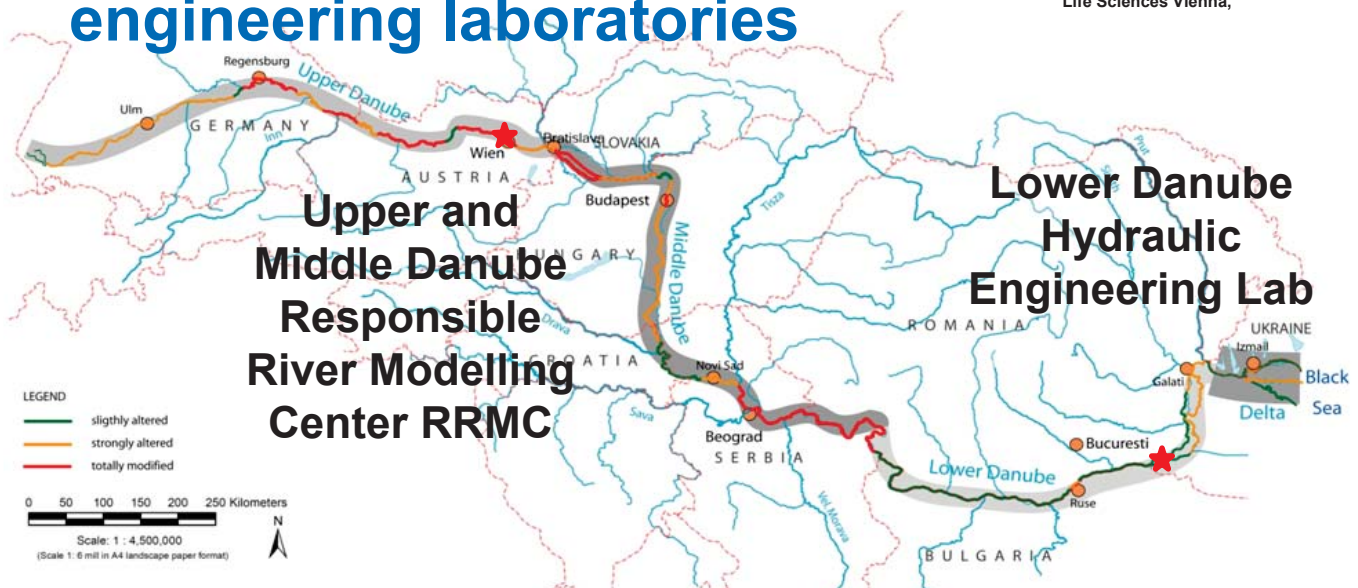
University of Natural Resources and Life Sciences Vienna,  
Department of Water, Atmosphere and Environment

- Especially for optimizing river engineering measures there are infrastructural needs for performing large scale hydraulic models, being able to simulate the hydrodynamic, sediment transport, morphodynamic and ecological situation in the various parts of the Danube Basin. Therefore **adequate hydraulic and environmental engineering laboratories** should be available.
- **Key data:**
  - Large discharge (about  $5 \text{ m}^3 \text{ s}^{-1}$ )
  - Water level difference → water supplied free flowing

# Suggestion for two large hydraulic and environmental engineering laboratories



University of Natural Resources and Life Sciences Vienna,

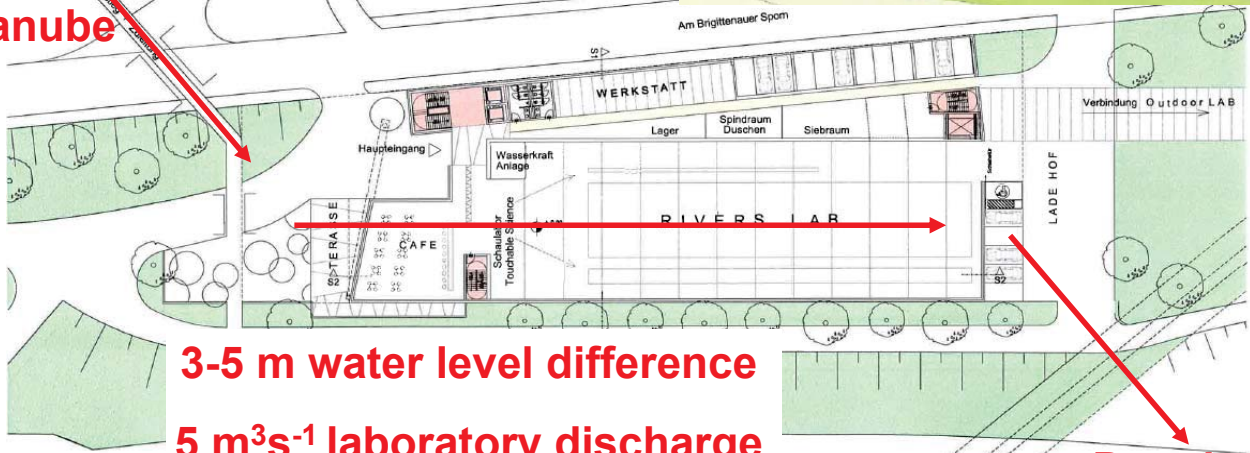




## Idea for Upper and Middle Danube



**Danube**



**3-5 m water level difference**

**5 m<sup>3</sup>s<sup>-1</sup> laboratory discharge**

**Danube Canal**

18. 11. 2011

The CDLab IM\_FLUSS and related ideas for the common implementation of the Danube Strategy I Helmut Habersack





## Univ. Prof. DI Dr. Helmut Habersack

Christian Doppler Laboratory for Advanced Methods in River Monitoring,  
Modelling and Engineering

<http://cdlabor-imfluss.boku.ac.at>

<http://www.boku.ac.at>

IWHW - Institute of Water Management, Hydrology and Hydraulic  
Engineering,

WAU - Department of Water, Atmosphere and Environment

BOKU - University of Natural Resources and Life Sciences, Vienna

Muthgasse 107, 1190 Vienna, Austria

email: [helmut.habersack@boku.ac.at](mailto:helmut.habersack@boku.ac.at)

tel: 0043 1 3189900 101

fax: 0043 1 3189900 149

### United Nations Academic Impact (UNAI)

*"It is often said that if the United Nations did not exist, we would have to invent it. I fully agree. And that is why we have to strengthen its capacities on each of the three pillars of the United Nations' work: peace, development and protection of human rights. Part of that effort means continuing to open our doors to new partners. The academic community is surely at the top of that list. My colleagues and I have been discussing an initiative called 'Academic Impact.' We hope to build stronger ties with institutions of higher learning; ... we hope to benefit from your ideas and scholarship."*

UN Secretary-General Ban Ki-moon, in his address at Fairleigh Dickinson University, 10 September 2008

#### Introduction

The United Nations Academic Impact (UNAI) is a programme of the Outreach Division of the United Nations Department of Public Information and has been formally launched by UN Secretary-General Ban Ki-moon at a two-day summit in November 2010 at UN Headquarters in New York.

As a global initiative the UNAI aligns institutions of higher education with the United Nations in actively supporting ten universally accepted principles in the areas of human rights, literacy, sustainability and conflict resolution.

The Academic Impact also asks each participating college or university to actively demonstrate support of at least one of those principles each year.

The critical role of higher education in economic and social development and as a foundation for world peace is widely acknowledged. Only lacking is the resolve and action of academic leaders around the world. By formally endorsing the ten principles in the Academic Impact, institutions make a commitment to use education as an engine for addressing global problems.

#### Principles

Its essential frame of reference is:

- i) To bring into association with the United Nations, and with each other, institutions of higher learning throughout the world.
  - ii) To provide a mechanism for such institutions to commit themselves to the fundamental precepts driving the United Nations mandate, in particular the realization of the universally determined Millennium Development Goals
  - iii) To serve as a viable point of contact for ideas and proposals relevant to the United Nations mandate.
  - iv) To promote the direct engagement of institutions of higher education in programs, projects and initiatives relevant to this mandate.
- Academic Impact is informed by a commitment to support and advance ten basic principles:
1. A commitment to the principles inherent in the United Nations Charter as values that education seeks to promote and help fulfil;
  2. A commitment to human rights, among them freedom of inquiry, opinion, and speech;

3. A commitment to educational opportunity for all people regardless of gender, race, religion or ethnicity;
4. A commitment to the opportunity for every interested individual to acquire the skills and knowledge necessary for the pursuit of higher education;
5. A commitment to building capacity in higher education systems across the world;
6. A commitment to encouraging global citizenship through education;
7. A commitment to advancing peace and conflict resolution through education;
8. A commitment to addressing issues of poverty through education;
9. A commitment to promoting sustainability through education;
10. A commitment to promoting inter-cultural dialogue and understanding, and the "unlearning" of intolerance, through education.

#### Activities

Participants in this initiative are expected to undertake to further, within their institutions, policies and programmes that reflect adherence to the principles governing Academic Impact. This would specifically include:

- a) Undertaking one new activity each year, to actively address at least one of the ten basic principles of Academic Impact listed above. Examples of this could include research projects and papers, the hosting of a conference, the financing of participation of students in a specific United Nations activity in the field, or a specific action or activity on campus. Any activity which is sponsored or paid for by a United Nations entity in the context of its own work programme shall be excluded from consideration.
- b) Placing prominently upon its websites, or in periodic printed publications, details of such activity, highlighting its relationship to the Academic Impact.

#### Participation

To participate in the UNAI please complete the enrollment form at the Academic Impact website.

For further information, please visit:

UNAI website: <http://academicimpact.org>

UNAI on facebook: <http://www.facebook.com/ImpactUN>

UNAI on twitter: <http://twitter.com/ImpactUN>

\* \* \* \* \*



# THE PROJECT

The **life science (LS) scene in Eastern Europe** has developed continuously and with commitment in the past years. Attractive growth rates of **up to 6%** significantly exceed the average of the old EU countries.

Austria has traditionally had good access to these countries and has know-how in the LS sector.

## THE OBJECTIVES ARE ...

- ... building a **network** of the LS communities of the CEE countries to form an internationally competitive platform
- ... the **establishment** of a visible and sustainable life science communication infrastructure in the CEE region.



# THE BENEFITS

- 
- **Promotion of research and development** in the area of life sciences as a sustainable future strategy.
  - **Development of the economic LS potential** of the CEE region and creation of sustainable jobs in the industries of the future.
  - **Support** of Western European companies and institutions in their market entry in CEE and vice versa by using the LS communications platform, which is to be newly created
  - Establishment of **Austria as a bridgehead** - 33% of the CEE companies that want to establish a location in the West use Vienna as their headquarters.
  - **Best-practice sharing/lessons learnt**





# PRACTICAL IMPLEMENTATION



Building a network



Web platform



Workshops




Congress  
& Science Award



Print medium



## @ Building a network

- 
- Resume and intensify **contact with potential cooperation partners** and financing institutions (local LS companies, local LS centers, local academies of science, CENTROPE, ABA, ÖGBMT, Visegrád Group, EVCO, AVCO)
  - Establish **personnel resources** in local structures
  - **Development of media kits** for print and web; start of sales talks
  - **Ongoing PR activities**
    1. Across activities between Congress & Science Award & Print & Web
    2. Transnationally between the countries involved

# @ Web platform



- Parallel to the print medium, an **up-to-date web platform** will be established
- The objective is to use a **transnational**, rapidly available communication medium in order to keep the **exchange of information and experiences up to date**.

# @ Workshops



- **Innovation Meets Money** - partnering events for interested parties such as financiers, licensees and sponsors from the West as well as researchers and start-ups from the East
- **The objective is to raise capital for prospective projects** and to bring research results to market maturity via start-up companies
- The objective is to strengthen the **local LS clusters**

# @ Congress & Science Award



- Based on the model of the **Austrian Life Science Award (ALSA)** an LS science award will be created for the Eastern European countries
- The judging panel will consist of **representatives of local academies**
- The award ceremony will take place at an interval of two years, each time in a different CEE country as part of an LS congress.

# @ Print Medium



- **Four times a year** (6-8 issues in the medium term) an **English-language print medium** will illustrate the evolving life science scene in the countries and follow their activities. Separate local-language editions are possible.
- Content: research work, projects and initiatives in the **LS industry in the respective countries**
- The **print medium** is a central component of the ongoing communication strategy and **ensures the exchange of information between the LS clusters.**

# PROPONENTS

→ **Kurt Konopitzky**

Long-standing President of the Austrian Association of Biotechnology (Österreichische Gesellschaft für Biotechnologie, ÖGBT), Founding member of Austrian Biotech Industries (ABI), former Managing Director of Boehringer Ingelheim Austria GmbH, Managing Director of PEA-CEE GmbH and PEC-GmbH

→ **Josef Brodacz**

Publisher of Chemiereport, Initiator and organizer of ALSA - Austrian Life Science Award

→ **Doris Dobida**

Marketing Communications Philips Medical Systems, Marketing Communications for AIT, Establishment and management of the platform Life Science Austria, Director strategic company locations Life Sciences (ABA)

→ **Renate Haiden**

Head of advertising Springer Verlag, Editor-in-chief Bohmann Verlag, Managing Director of Publish Factory GmbH, ALSA coordination office

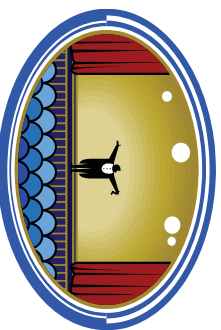


# Thank you!





**CEEPUS & EUSDR**  
Vienna, Nov 2011



### **CEEPUS Intro**



basics about CEEPUS  
results  
evolution and outlook  
quest for excellence



### **CEEPUS overview**



basics about CEEPUS  
results  
evolution and outlook  
quest for excellence

### **In the beginning**



### **...there was the Danube...**



### **...there was the region**

common history  
with different takes, of course  
similar administrative culture  
a living tradition of academic cooperation






then there was politics

**1989**

...and then there was:



**C**entral  
**E**uropean  
**E**xchange  
**P**rogram for  
**U**niversity  
**S**tudies



**mission**

- regional cooperation
- equal partnership
- quest for excellence
- pooling the best
- "laboratory" and "incubator"



**working mode**

regional university networks  
all subject areas welcome

**regional mobility**  
exchange actions for students and teachers




**working mode**

semester stays  
excursions  
short term excursions  
teacher mobility





**special features**

internal currency

lean management


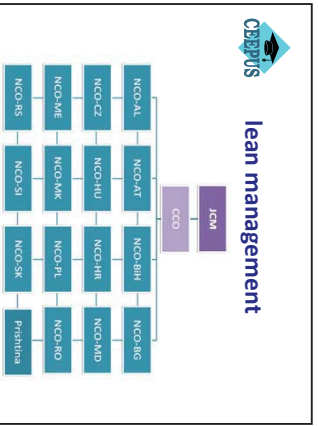




**internal currency**

comprehensive grants  
no transfer of funds

"1 Scholarship Month"


**CEEPUS** and, did it work?



**CEEPUS Intro**  
basics about CEEPUS  
**results**  
evolution and outlook  
quest for excellence



**CEEPUS** The CEEPUS Universe

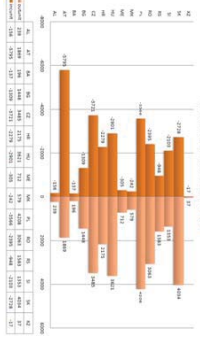


**CEEPUS**




**CEEPUS** scholarship months CEEPUS II  
28.601

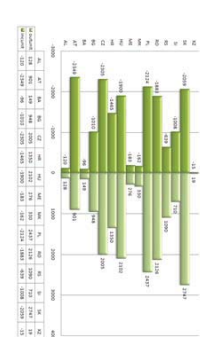
scholarship months 2005 - 2011



Year	2005	2006	2007	2008	2009	2010	2011
Scholarship months	18,000	20,000	22,000	24,000	26,000	28,000	28,601


**CEEPUS** mob. applications CEEPUS II  
17.318

aplicaciones 2005 - 2011



Year	2005	2006	2007	2008	2009	2010	2011
Mobile applications	10,000	11,000	12,000	13,000	14,000	15,000	17,318

**CEEPUS** persons



**CEEPUS** persons

CEEPUS I 15.438 persons  
CEEPUS II 15.706 persons

**31.144**

**CEEPUS results overall evaluation**

CEEPUS I  
best practice example  
should be used elsewhere as well



**CEEPUS CEEPUS II overall evaluation**

developing and implementing JDs  
CEEPUS has been successful  
2/3 of the network participants interviewed  
say helpful to achieve their objectives




**CEEPUS timeline overview**

CEEPUS I 1995 – 2005  
signed Dec 8, 1993, Budapest  
CEEPUS II 2005 – 2011  
signed Mar 9, 2003, Zagreb  
CEEPUS III 2011 -  
signed Mar 25, Budva



**CEEPUS evolution**

CEEPUS I  
multilateral cooperation, ECTS  
CEEPUS II  
Joint Degrees  
CEEPUS III  
Linking up to science and research



**CEEPUS Sweet success!**

USP - unique selling proposition  
unique regional focus  
and country composition



innovative non-monetary funding system  
based on national resources in a variable  
geometry

**CEEPUS Intro**

basics about CEEPUS  
results  
evolution and outlook  
quest for excellence



**CEEPUS what is new**

CEEPUS III  
linking up to science and research



**CEEPUS increased flexibility**

Agreement  
Rules of Procedure  
Work Program



 **CEEPUS Science**

focus on Joint PhD Programs  
 "joint thesis supervision"



 **Silent partners**

"The participation of institutions other than eligible universities as Silent Partners shall be foreseen upon invitation by an eligible university and provided the CEEPUS budget is not affected."



 **Perfect Partner**

- Experienced network**
- Structure**
- Financing**
- Selection procedures**
- Flexibility**

 **CEEPUS Intro**



basics about CEEPUS results evolution and outlook  
**quest for excellence**

 **Ministers' Prize**



 **Ministers' Prize**

CI-HU-0010-04-0910  
 "Teaching and Learning Bioanalysis"  
 coordinated by the University of Pecs  
 Prof. Ferenc Kildr



 **enthusiasm & competence**

"Thanks to the CEEPUS program my vision for Europe changed a lot. What these four months during my stay in Ljubljana gave me can not be substituted with no lectures or books!"



 **enthusiasm & competence**

"The exchange with the CEEPUS program was a turning point in my life. The CEEPUS program opened my eyes wide open for the new European perspectives."



**CEEPUS** enthusiasm & competence

*"These 4 months there gave me knowledge that will stay with me forever."*



**CEEPUS** enthusiasm & competence

*"My time as an exchange student was not an experience, it was a revelation."*



**CEEPUS**

**CEEPUS Intro**

basics about CEEPUS  
results  
evolution and outlook  
quest for excellence



**CEEPUS**



Elisabeth Serrhini  
Secretary General



**DANUBE RECTORS' CONFERENCE**

**BOKU Vienna 18 November 2011**

NOVA/BOVA Nordplus network project  
**Lessons learnt from the BOVA-NOVA Network**

Þorbjörg Valdís Kristjánsdóttir  
Nordplus central coordinator  
Agricultural University of Iceland



# NOVA/BOVA Nordplus Network

- Student mobility
  - “normal” mobility
  - Express mobility
- Teachers mobility
- Intensive courses
- Network meetings

## Student mobility – normal mobility

- Full-time studies
- One year of previous studies
- Live in host country
- Fully recognised
- 1-12 months
- 200€/month
- Travel scholarship (250€ or 350€)

# Student mobility – express mobility

- 1-4 weeks
- Travel scholarship (330€ or 430€)
- PhD students can not apply for grant

# Teachers mobility

- Specific and integrated teaching activity
- Tutoring and development of teaching materials.
- Minimum 1 week (5 days) or eight teaching hours
- 355€ per week + travel grant

# Mobility - numbers

2010/2011

- 37 students\*5 months
- 67students \*1 week
- 7 teachers \*1 week

• NOVA->BOVA:

23 students

2010/2011

- 2 students\*5 months
- 23students \*1 week
- 6 teachers \*1 week

• BOVA-> NOVA:

8 students

2 teachers

6

## INTENSIVE COURSES

- **Evaluation of Quality of Poultry Meat and Eggs, September 22 - October 1, 2010, LSMU-VA**
  - Total number of students: 16
- **Economics and Management of Rural Development, November 22-26, 2010, LZUU**
  - Total number of students: 28
- **Forest Tree Breeding and Adaptation, March 21 – 25, 2010, LLU**
  - Total number of students: 22
- **Renewable Energy Technologies, March 14 - April 1, 2010, LZUU**
  - Total number of students: 23

# Nordplus application

- Intensive courses 2011/2012
- “Woody biomass plantations: options for cost-effective mitigation of climate change effects” - LLU
- “Sustainable Pig Production” – SLU and LLU
- “Evaluation of quality of poultry meat and eggs” – LSMU-VA
- “Game Animal Protection and Management” – LZUU
- “Innovation in Rural Economics” – EMU
- “Miljö och kommunikation” – HU-AF

# Sustainable Pig Production

The screenshot shows the Nordplus Framework Programme website. The main headline is "Crossing borders in agricultural education". The article text reads: "Synergies within Nordic-Baltic agricultural education reinforce the cooperative environment between the two regions. After having met in Lithuania last year, coordinators of the networks NOVA and BOVA decided on a continued common effort to build international education in the field of agriculture and life sciences." Below the article, there are sections for "Encouraging joint study programmes" and "New cross-national adult learning projects". The website also features a sidebar with navigation links for "Home", "About Nordplus", "Who can apply?", "How to apply?", "Project examples", and "Find a partner". The footer of the website includes the NOVA University Network logo and a list of participating universities: Tallinn, Columbus, Copenhagen, Accra, Naimy, and Me.

# Networking

- 2010/2011 no funding for networking !
  - Meeting with NOVA/BOVA Nordplus coordinators and academic advisors in Jelgava 23-24 March 2011



*European Research Boosting Innovation, Creating Jobs*

## Opportunities for Universities in the context of the European Research Area

**DRC Danube Rectors Conference**

*Financing possibilities for DRC activities*

**Dimitri CORPAKIS**  
Head of Unit

C5-Regional dimension of innovation  
DG Research and Innovation

Vienna, 18/11/11

research





# Universities are significant players in boosting the knowledge economy

- A challenging leading role on *driving innovation forward*
- *Agents of change* in sectoral and regional contexts – *expected important role in Smart Specialisation Strategies*
- *Producers* of the knowledge economy
- Part of the Tripe Helix
- *Honest brokers* in the context of regional economies



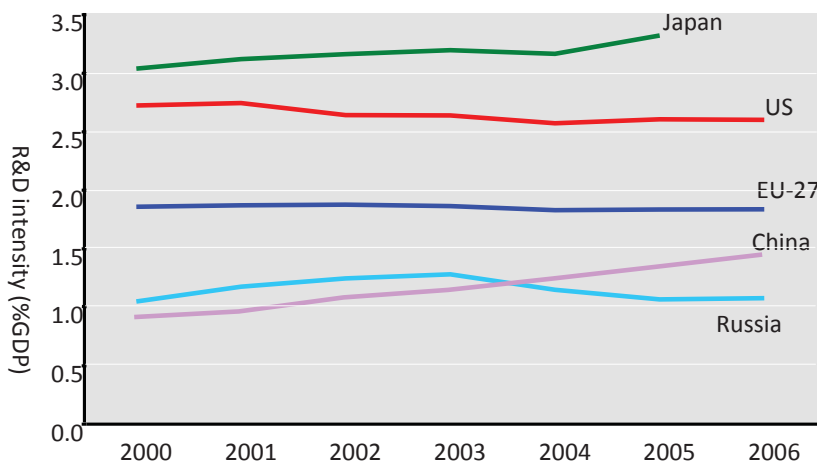
research innovation



## Our global position in numbers

- Investment in R&D:

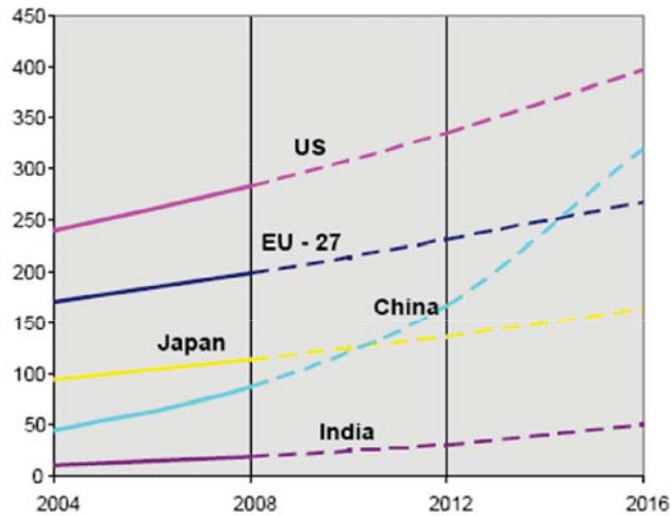
	R&D investment (%GDP)	R&D funded by private sector (%)
EU-27	1.8	55
US	2.6	64
Japan	3.3	75
China	1.4	65



research innovation



## Evolution of world R&D expenditure in real terms (in € billion at 2000 prices)



Presentation of J.M. Barroso to the European Council, 4 February 2011

Source: European Commission

research innovation



## What's wrong in Europe?

- Poor availability of finance
- Costly patenting
- Lack of legal and tax level-playing field
- Outdated regulations and procedures
- Slow standard-setting
- Weaknesses in public education and innovation systems
- Failure to use public procurement strategically
- Fragmentation of efforts

Presentation of J.M. Barroso to the European Council, 4 February 2011



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- 'Smart' fiscal consolidation
- Improved framework conditions
- Steer and monitor at EU level
- A future-oriented EU budget

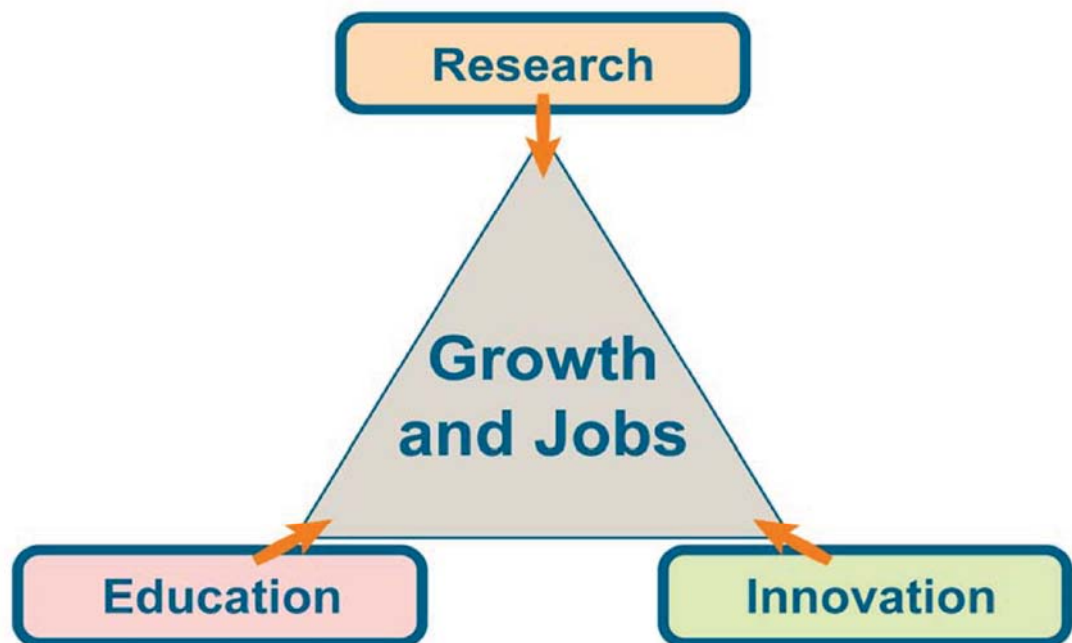


Presentation of J.M. Barroso to the European Council, 4 February 2011

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## The Knowledge Triangle



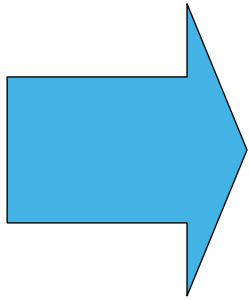
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## Europe 2020 strategy

- 3 Clear objectives
  - Smart, sustainable and inclusive growth



Invest 3% of GDP in R&D by 2020

- Focus on Innovation
- Research and innovation funding contributes directly to the achievement of Europe 2020 (Innovation Union flagship initiative)



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## Europe 2020 strategy Smart growth

- Turn Europe to a knowledge and innovation economy
- New sources of growth and creation of new jobs require national efforts to boost research and innovation, upgrade education and remove barriers to entrepreneurship
- Harness the untapped potential of the single market
- Use EU funds to drive the public sector towards new growth paths, stimulating discovery, innovation and entrepreneurship



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- Research and Innovation boost productivity and growth
- Future research and innovation investments expected to have even stronger impact in terms of growth and job creation
- significant social and environmental returns
  - Current Framework Programme estimated to bring 900,000 jobs and to add 1% to the EU's GDP



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## Europe 2020: 3% objective can still deliver

- meeting the Europe 2020 target of increasing R&D investment to 3 percent of GDP could create 3.7 million jobs and increase annual GDP by up to €795 billion by 2025. One million extra researchers will be needed.
  - Source: P. Zagamé, (2010) The cost of a non-innovative Europe, [http://ec.europa.eu/research/social-sciences/policy-briefs-research-achievements\\_en.html](http://ec.europa.eu/research/social-sciences/policy-briefs-research-achievements_en.html)



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## Innovation Union Flagship Initiative

- A plea to the Member States to:
  - invest in R&D and innovation
  - create the right framework conditions
  - ensure that remaining barriers for entrepreneurs to bring "ideas to market" will be removed by:
    - better access to finance
    - affordable IPR
    - faster setting of interoperable standards
    - strategic use of the procurement budgets



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## Funding opportunities for the DRC

- Funding opportunities under the 7th Framework Programme for Research and Technological Development (2007-13)
- Funding opportunities under the Competitiveness and Innovation FP (CIP) (2007-2013)
- Funding opportunities under the present and future Cohesion policy (funds)
- Beyond funding: setting up the ERA



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# Why research at European level?

- Pooling and leveraging resources
  - Resources are pooled to achieve critical mass
  - Leverage effect on private investments
  - Interoperability and complementarity of big science
- Fostering human capacity and excellence in S&T
  - Stimulate training, mobility and career development of researchers
  - Improve S&T capabilities
  - Stimulate competition in research
- Better integration of European R&D
  - Create scientific base for pan-European policy challenges
  - Encourage coordination of national policies
  - Effective comparative research at EU-level
  - Efficient dissemination of research results



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# FPs: significant impacts on S&T and the economy

- Significant economic benefits

€1 (research) at European level → €4-7 (long-run, econometric models)

- Reduced commercial risk
  - increased turnover and profitability
  - enhanced productivity and market share

- Innovative performance

- Enterprises participating in FP:
  - tend to be more innovative
  - more likely to patent
  - engage in innovative co-operation with other firms and universities



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# Funding opportunities under the 7th Framework Programme for Research and Technological Development (2007-13):

**the 2012 Calls for proposals are open !**



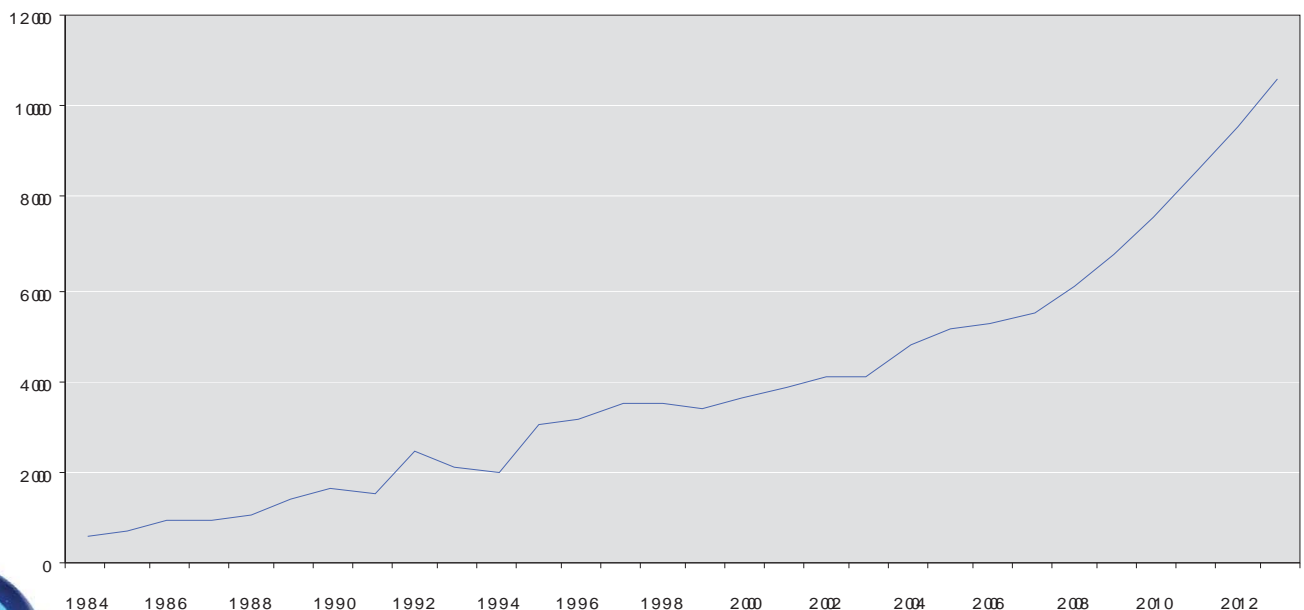
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## Budgets of the EU Framework Programmes 1984-2013

€million

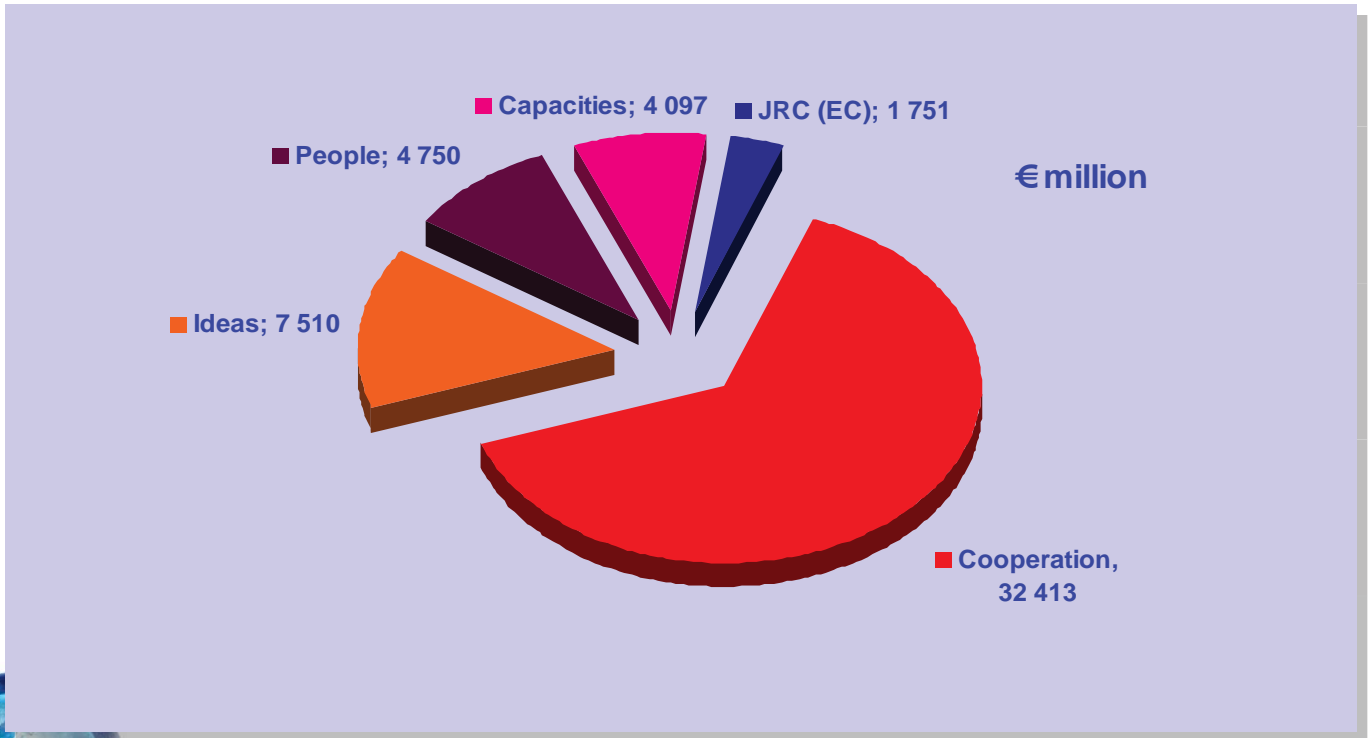


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# FP7 budget (€ 50 521 million, current prices)



Note:



## FP7 2007 –2013 | Specific Programmes

*Cooperation* – Collaborative research

*Ideas* – Frontier Research

*People* – Marie Curie Actions

*Capacities* – Research Capacity

JRC non-nuclear research

*Euratom* direct actions – JRC nuclear research

*Euratom* indirect actions – nuclear fusion and fission research





# Why are these calls important?

- Research and innovation at the top of the political agenda
- EU research funding delivering the Innovation Union
- Tackling the biggest societal challenges facing Europe
- Creating jobs with special attention for SMEs
- Supporting the best researchers and innovators in Europe



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# What is new?

- Bigger budgets to kick-start innovation
- Implementing the EIP on active and healthy ageing
- Calls targeting biggest societal challenges facing Europe
- Two new actions for SMEs
- Bridging the gap from results to commercialisation



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# Budget key figures "growth & jobs"

- € 7 billion in total
- SMEs
  - ▶ € 1 billion package for SMEs under the calls
  - ▶ € 120 million for "RSFF for SMEs" → € 1 billion in private investment
- € 1.6 billion European Research Council
- € 900 million for Marie Curie Actions (10.000 researchers)



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# Budget key figures "grand challenges"

- Health € 654 million (inc. research on active and healthy ageing)
- ICT € 1.3 billion (inc. research on active and healthy ageing)
- Environment € 265 million
- Nanotechnology € 488 million
- Transport € 488 million
- € 313 million for European bio-economy including safer food



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# Who is the target?

All research actors in the EU and the Associated Countries:

- Universities
- Research organisations
- Large industry
- SMEs
- Financial institutions



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## Universities are at the heart of the Framework Programme

- The traditional ***University – Business consortium*** has always been at the heart of the Research Framework Programme
- ***Thousands of universities*** have teamed up with businesses to ***test new ideas, advance knowledge or simply think about new strategies for innovation***, during the 7 editions of the FP starting in the mid-eighties



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## The Regional Dimension in FP7 holds a strong role for Universities

- *Regions of Knowledge* under the *Capacities* specific programme, aims at bringing European Regions faster to the Knowledge Economy through *transnational cooperation of Research intensive Clusters* (following the Triple Helix concept linking Business, Academia and Government)



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## The Regional Dimension in FP7 holds a strong role for Universities (II)

- *(Unlocking) Research Potential* under the *Capacities* specific programme aims at stimulating and increasing the research capacities of excellent research institutions located in the so-called *Convergence and Outermost Regions* of Europe (according to criteria defined under Cohesion policy regulations).
- The programme links these institutions to excellent partnering organisations located in at least 3 different Member or Associated States, organising staff exchanges, hiring researchers, funding small equipment and improving IPR Management of the coordinating institution



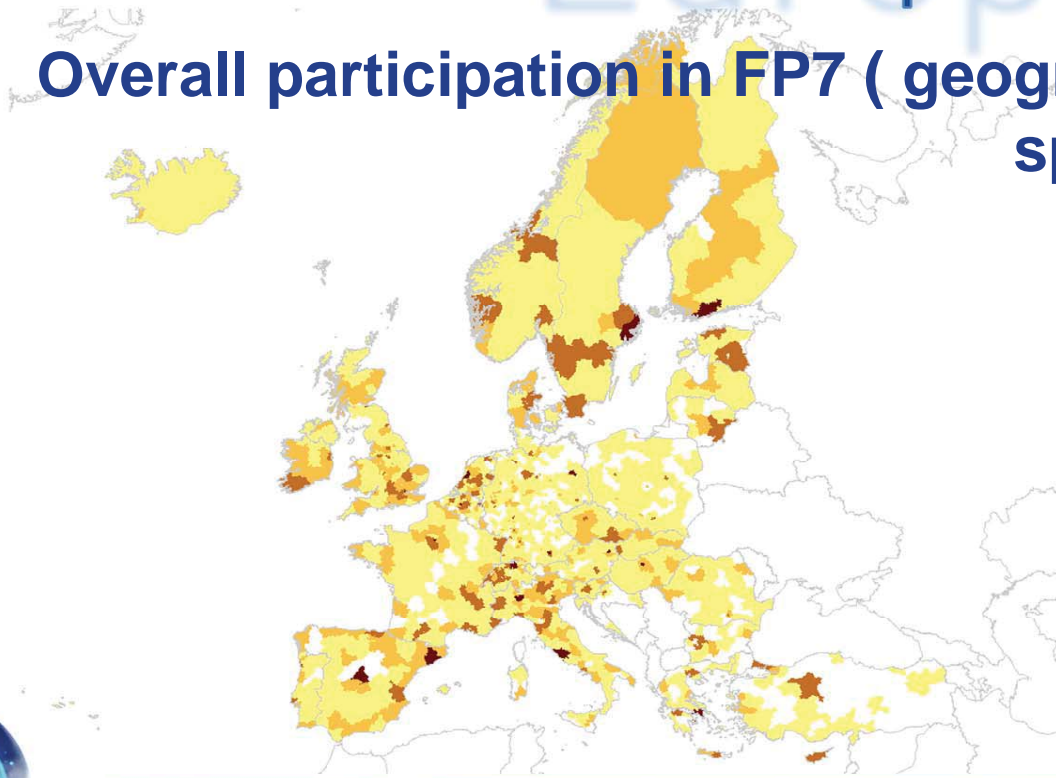
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## Overall participation in FP7 (geographic spread)



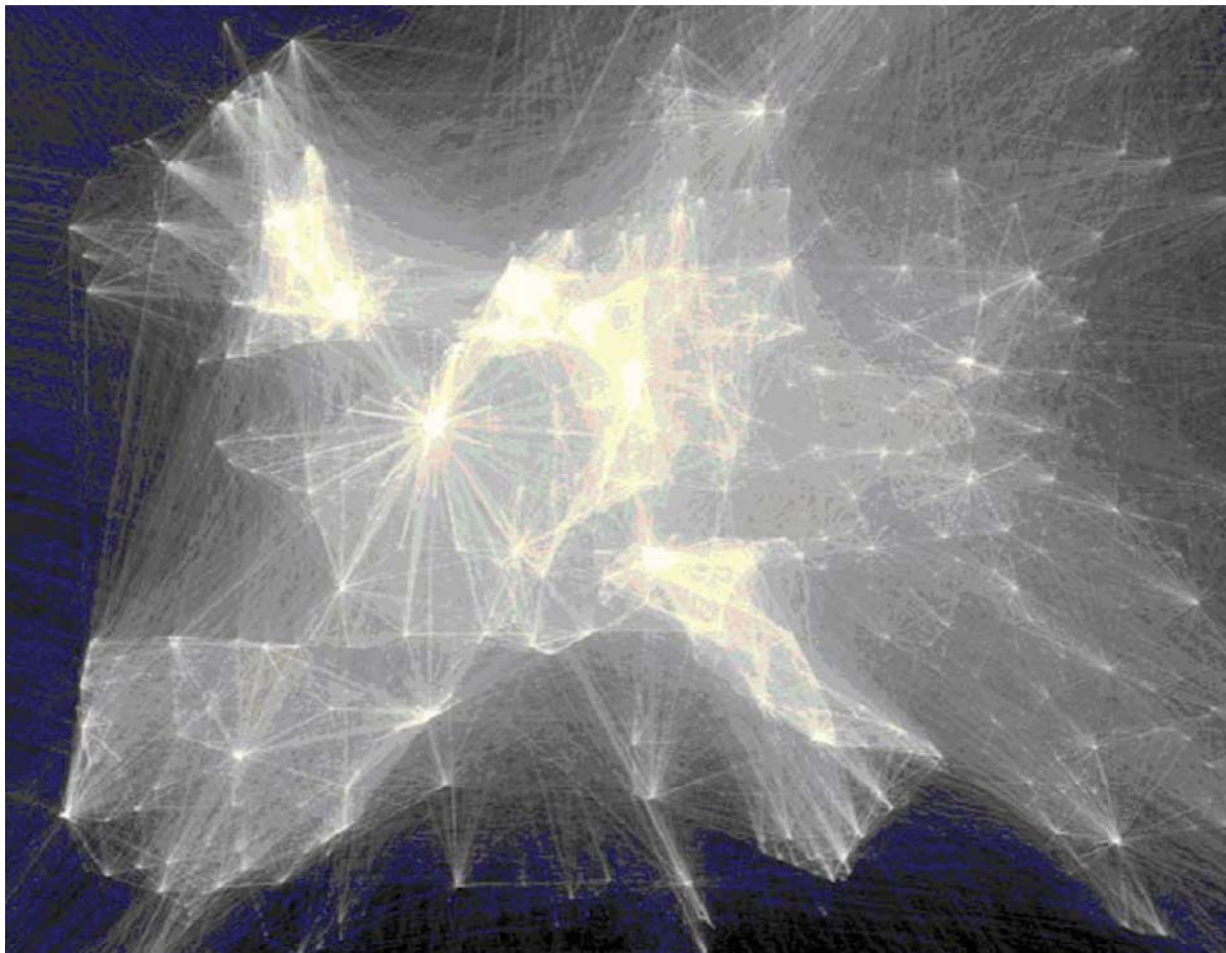
Number of participants

- 501 - 2777
- 101 - 500
- 21 - 100
- 1 - 20



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The Heat-map of scientific collaboration in Europe 2005-2009



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# Funding opportunities under the Competitiveness and Innovation FP (CIP) (2007-2013)



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## Competitiveness and Innovation Framework Programme (2007-13)

- CIP supports innovation activities (including eco-innovation), provides better access to finance and delivers business support services in the regions.
- It encourages a better take-up and use of information and communication technologies (ICT) and helps to develop the information society. It also promotes the increased use of renewable energies and energy efficiency.
- CIP runs from 2007 to 2013 with an overall budget of € 3621 million.
- CIP is divided into three operational programmes. Each programme has its specific objectives, aimed at contributing to the competitiveness of enterprises and their innovative capacity in their own areas, such as ICT or sustainable energy:
  - The Entrepreneurship and Innovation Programme (EIP)
  - The Information Communication Technologies Policy Support Programme (ICT-PSP)
  - The Intelligent Energy Europe Programme (IEE)



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# Support to Innovation through CIP (2007-13)

- The European Commission provides support for innovation through a series of initiatives and actions aimed at providing financial support to innovators, as well as better innovation support services for SMEs, notably start-ups, by developing and testing new forms of business support and facilitating transnational cooperation with a view to mobilising more resources for the creation of a European Innovation Space.
- DG Enterprise and Industry supports this aim through the CIP financial instruments, through policy cooperation under the PRO INNO Europe<sup>®</sup> initiative, partnership platforms between European innovation professionals under Europe INNOVA and through the IPR Helpdesk that provides assistance on intellectual property issues for EU funded projects.



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# Cohesion policy (2007-2013)



research

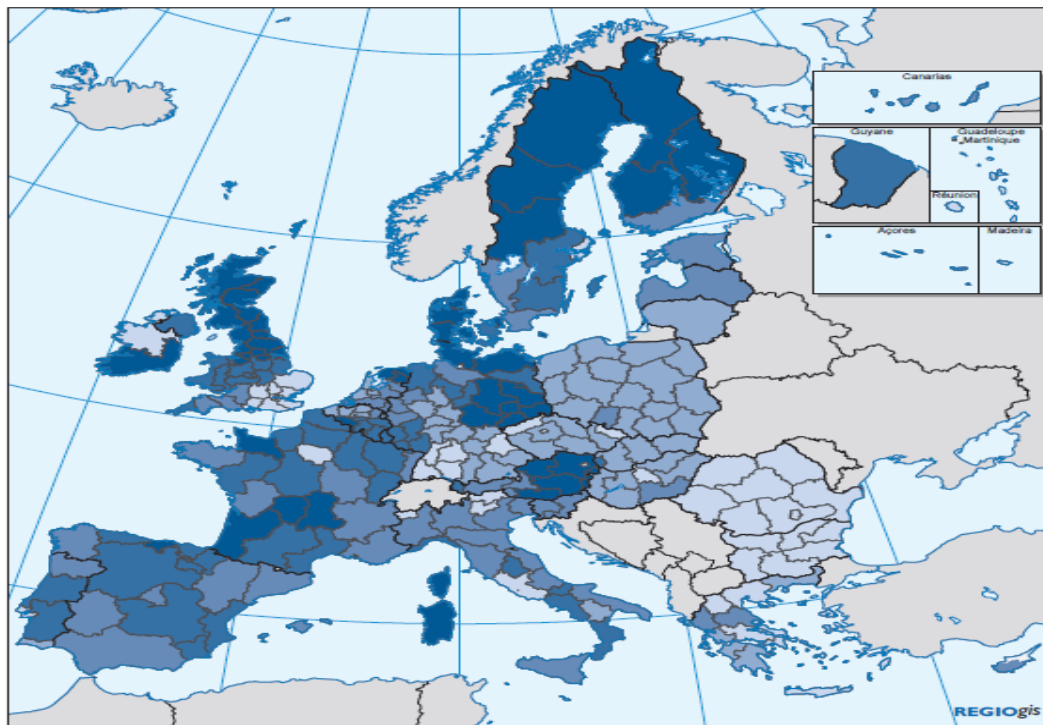
innovation



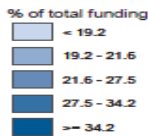
# Cohesion Policy Funding for RTD and innovation 2007-2013

Cohesion Policy support for Innovation:

- ☐ 4% in 89'-93'
- ☐ 7% in 94'-99'
- ☐ 11% in 00'-06'
- ☐ 25% in 07'-14'



Planned investments of Cohesion Policy in RTD, innovation, enterprise environment, 2007-2013

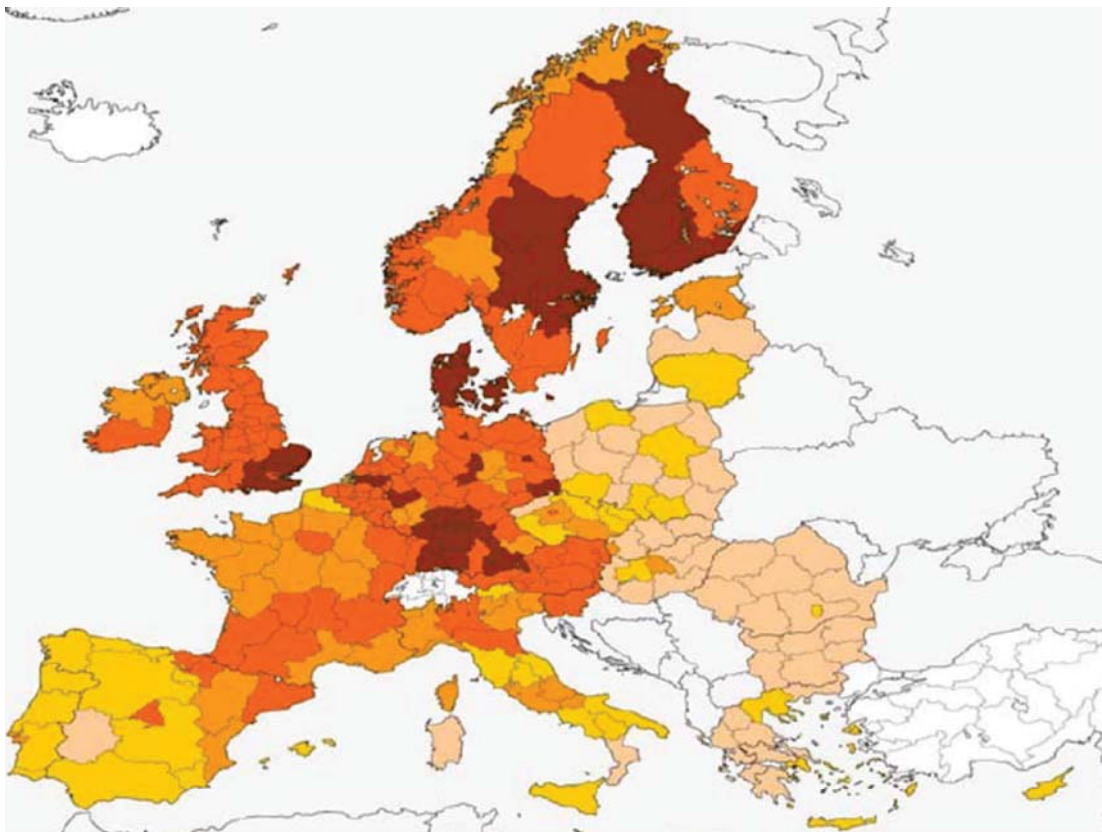


EU27 = 23.0  
Funding for RTD, innovation and enterprise amounts to some €79 billion  
Source: DG REGIO

0 500 Km

© EuroGeographics Association for the administrative boundaries

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## Regional Innovation Performance taxonomy

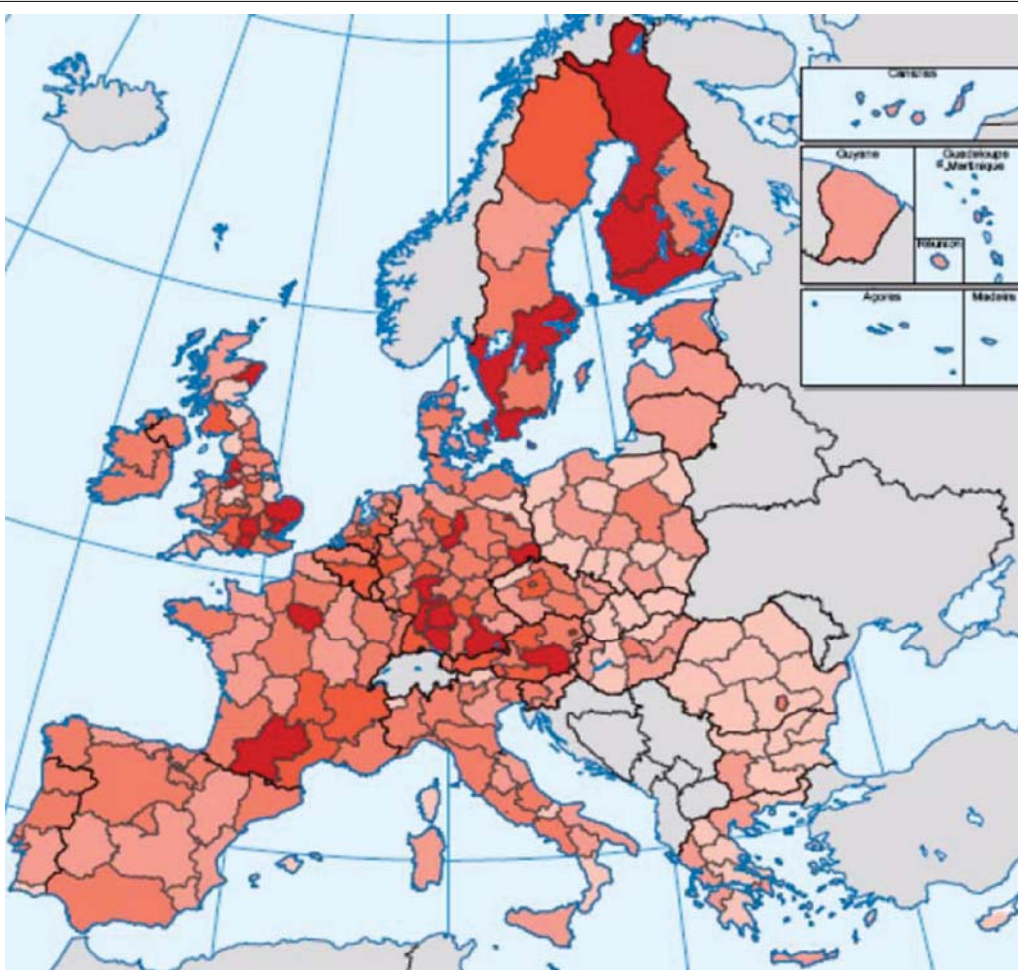
Source: Regional Innovation Scoreboard, 2009

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- GERD, 2007  
(Source DG REGIO, EUROSTAT)



## How the Structural Funds can stimulate R&D and Innovation investment in European regions

- Fund R&D infrastructure and equipment (conventional approach-still valid)
- favouring the establishment of medium and long term R&D and innovation investment strategies through Smart Specialisation (coupled with increased conditionality and clear thematic priorities)
- help create the appropriate framework conditions for stimulating R&D and innovation especially in connecting academia and industry
- stimulate the emergence of clusters of technological competence / excellence involving especially SMEs
- Favouring peer review through international expertise to raise quality in terms of strategy and delivery



# Beyond funding

*Building the European Research Area*

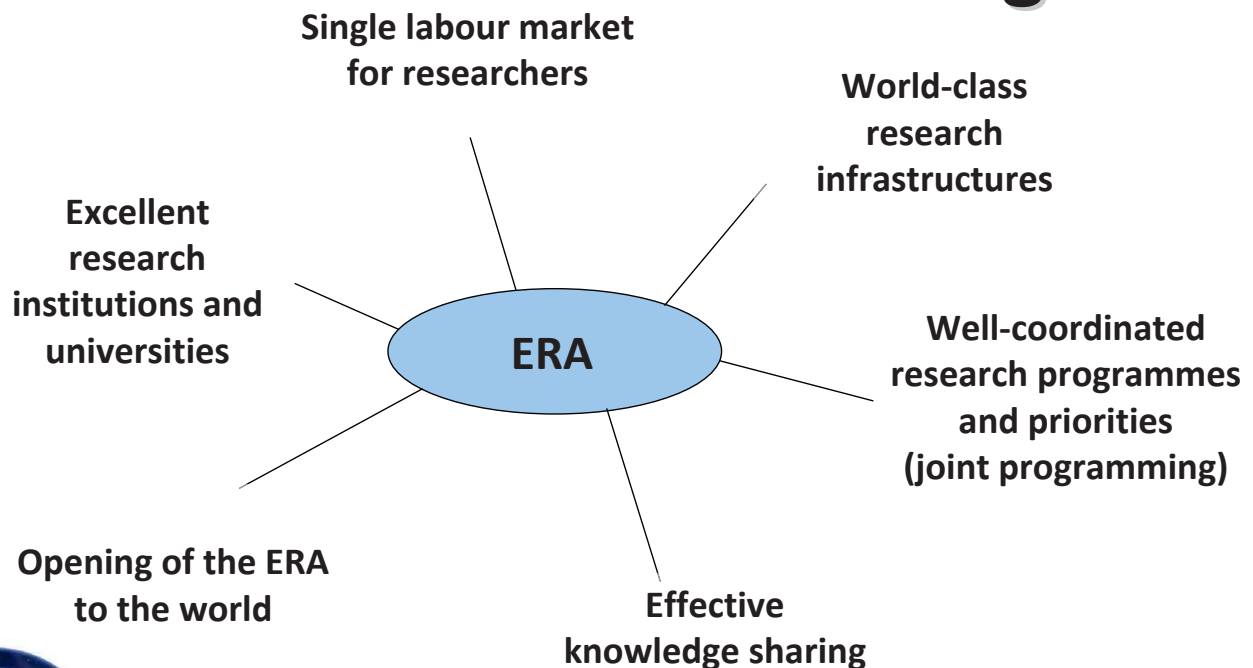


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## European Research Area (ERA) building blocks



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EUROPA > Quick links > Schools & universities

English (en)

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Publications and documents

Media centre

Quick links for...

- Businesses
- Non-governmental bodies and organisations
- Schools & universities**
- Job seekers
- Kids: games, quizzes and competitions

### Quick links for schools and universities

Find out about EU education and research programmes. Find teaching materials for schools.



#### Education

- [EU lifelong learning programme for education and training](#)  
An overview of EU education and training programmes (Erasmus, Leonardo da Vinci, Comenius, Grundtvig, Jean Monnet, Tempus, Erasmus Mundus)
- [Comenius programme for pre-school, primary and secondary education](#)  
Encouraging partnerships between schools in different countries and improving the mobility of pupils and staff
- [Erasmus programme for higher education](#)  
Encouraging cooperation between institutions for higher education and enabling students to study abroad
- [Leonardo da Vinci programme for vocational education and training](#)  
European programme for vocational education and training
- [Grundtvig programme for adult education](#)  
History and goals of European funding programme for adult education
- [Ploteus – portal on learning opportunities in Europe](#)  
Information on studying in Europe, including exchange programmes
- [Create a European CV and a language passport](#)  
Instructions, forms for creating European CV with language-skills section
- [Recognition of qualifications \(ENIC-NARIC\)](#)  
Provides access to national centres for information on educational systems
- [Erasmus Mundus scholarships](#)

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1/5

#### Popular links

- [The Europa Diary and Teacher's Guide](#)
- [Lingu@net Europa – the multilingual centre for language learning](#)
- [Traineeships in EU institutions](#)
- [EuroparTV - Young Europe](#)

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# Our Practical Guide to EU Funding is online and soon in its second edition !

[http://cordis.europa.eu/eu-funding-guide/home\\_en.html](http://cordis.europa.eu/eu-funding-guide/home_en.html)



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http://cordis.europa.eu/eu-funding-guide/home\_en.html

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European Union Cohesion Policy

Important notice

→ Home guide  
→ Supporting your ideas  
→ Finding sources of funding  
→ Combining different options  
→ Understanding the roles of authorities  
→ Checklist for funding  
→ Annexes  
Print the whole document  
→ Related information

### Introduction

At the Community level, the Union possesses three key funding instruments to support research and innovation:

- the Research Framework Programme funding research and;
- the Competitiveness and Innovation Framework Programme funding innovation and;<sup>1</sup>
- the Structural Funds and Cohesion Fund funding the Cohesion policy.

This Practical Guide was conceived in order to help potential beneficiaries of our programmes find their way through the three funding instruments and identify the most appropriate funding scheme for them. It:

- provides a concise description of the three funding sources;
- explains how they can in practice be combined and;
- provides policy makers with advice on setting up mechanisms at the national and regional levels to foster co-ordinated access to them.

<sup>1</sup> [Competitive European regions through research and innovation](#) COM (2007) 474 of 16/08/2007

Last updated on: 2010-11-24

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## Learn more !

### Participant Portal calls

<http://ec.europa.eu/fp7calls>

### More information about FP7 budget:

[http://ec.europa.eu/research/fp7/index\\_en.cfm?pg=budget](http://ec.europa.eu/research/fp7/index_en.cfm?pg=budget)

### More information about participation by country:

[http://ec.europa.eu/research/fp7/index\\_en.cfm?pg=country-profile](http://ec.europa.eu/research/fp7/index_en.cfm?pg=country-profile)



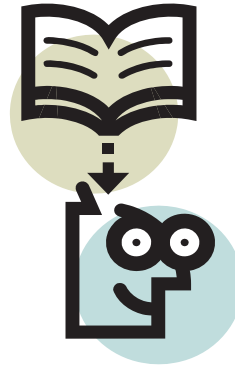
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# Thanks for your attention!



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Sharing Expertise



## Danube Rectors' Conference

### Funding opportunities - European Territorial Cooperation (ETC) and IPA-CBC programmes

Katrin Stockhammer and Ivana Lazic, INTERACT Point Vienna

17-18 November 2011 | Vienna



What geographic scale is your strategy?

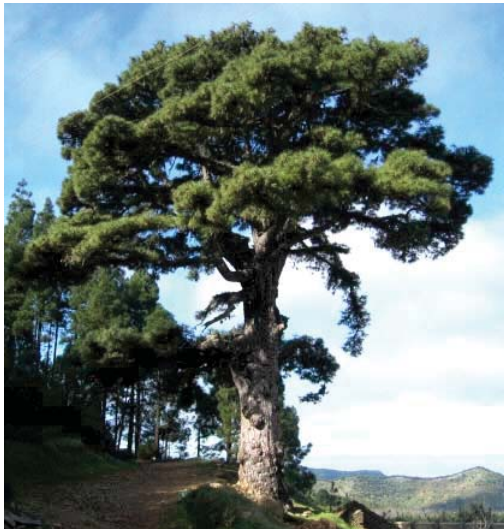


What geographic scale is your strategy?

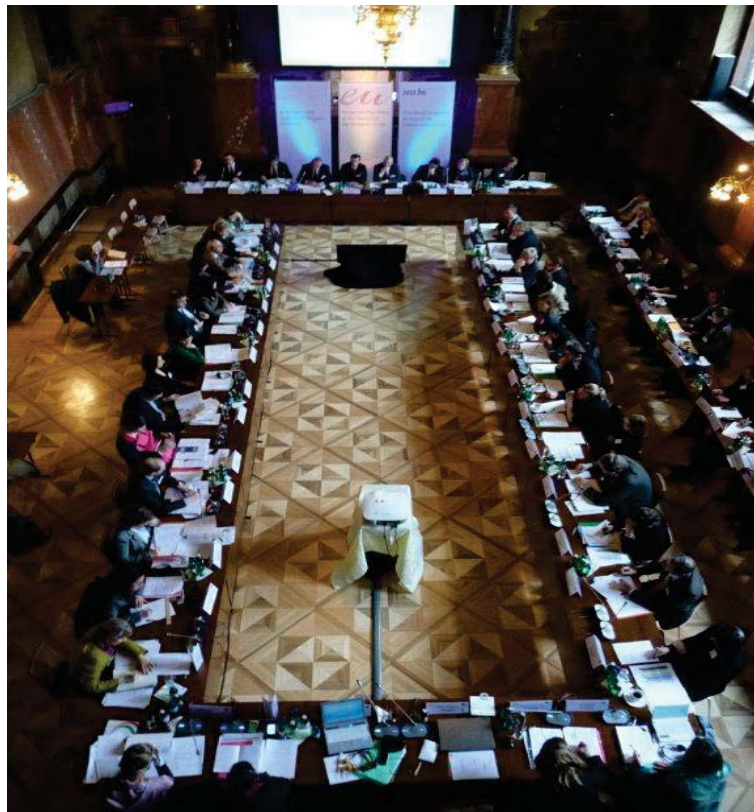




## Plasticity: the plants' way to cope with their environment



Source: 'Adaptation in Plants: Some Short and Long Term Perspectives'  
BOKU VIBT / DAGZ; University of Natural Resources and Life Sciences, Vienna



Monitoring Committee Meeting - Interregional cooperation. Source: INTERREG IVC Programme



## The Platform of European Territorial Cooperation and IPA-CBC programmes

- We create communities of actors throughout Europe, facing the same daily issues, questions and challenges.
- We organise conferences, seminars and workshops and publish studies and newsletters.
- We provide input to the European Commission.
- A Territorial Cooperation programme co-financed by ERDF & MS + CH + NO organised in 4 Zones.



## EUSDR Labgroup



- WHO? ETC programmes, regional Structural Funds programmes, financing institutions (e.g. EIB), European Commission
- WHAT? Finding common approaches and practical solutions for the implementation of the EUSDR





www.danube-region.eu

## The unique platform where you can find ...

- 1 **News**  
What's on in the Region
- 2 **Calendar**  
Follow all Danube Region events
- 3 **What is the EUSDR**  
Find out more about the Danube Region Strategy
- 4 **Priorities**  
What's happening in the 11 Priority Areas
- 5 **Who is who**  
Stakeholders in the Danube Region
- 6 **Funding opportunities**  
Find out how to finance Danube Region projects
- 7 **Projects and initiatives**  
Learn about existing projects
- 8 **Communication**  
Newsletters, maps, publications and more

**DANUBE REGION strategy**

Home | Calendar | What is the EUSDR | Priorities | Who is Who | Funding opportunities | Projects and Initiatives | More... | Manage

**News**

TransEcoNet News issue 10 now available!

New Danube Region Strategy Newsletter released!

Launch of www.danube-region.eu

**Calendar**

26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	4

**The EU Strategy for the Danube Region**

A united response to challenges affecting a fifth of the EU territory and over 100 million inhabitants, the EU Strategy for the Danube Region (EUSDR) follows the footsteps of the EU Strategy for the Baltic Sea Region and builds on its good practices. Many of the region's problems know no borders: flooding, transport and energy links, environmental protection and challenges to security all demand a united approach.

The strategy addresses four main objectives, or "Pillars":

- I Connecting the Region
- II Protecting the environment
- III Building prosperity in the Danube Region
- IV Strengthening the Danube Region

The Danube Region needs results: These four pillars set out the key goals and these are translated into 11 priority areas coordinated by the participating countries.

How does it work? No new EU funds, no new EU legislation, and no new EU structures: instead, a focus on closer synergies between authorities at all levels to maximise the impact of actions and funding.

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**INTERACT** | European Commission DG Regional Policy

**DANUBE REGION strategy**

Environmental Risks

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**About**

Priority Area 05 of the EUSDR "To manage environmental risks" is coordinated by Hungary (Ministry of Rural Development) and Romania (Ministry of Environment and Forests), with the involvement of a wide network of key players and stakeholders from the 14 countries of the Danube Region.

Here you can find out about main activities, projects and actions in the field of environmental risks in the Danube Region, latest news and upcoming events on the topic.

**News & Announcements**

**EUSDR and implementation of PA5**

Posted by [Petra Szávicz](#), Tuesday, 26th July 2011 @ 1:50pm

A general presentation of the Strategy and an overview of the implementation steps for Priority Area 5 were presented to relevant stakeholders at the Summer University held in Baile Tusnad, Romania.

**Presentation of the Danube Strategy**

Posted by [Petra Szávicz](#), Tuesday, 26th July 2011 @ 1:48pm

EUSDR and Priority Area 5 were presented to a group of stakeholders in Sfântu Gheorghe, Romania by the Romanian Co-coordinator.

**Danube Day in Romania**

Posted by [Petra Szávicz](#), Tuesday, 26th July 2011 @ 1:35pm

The DANUBE DAY - 29th of June - was celebrated in Romania with a cultural and gastronomic festival organized in Sulina on the 1st of July.

On the 29th of June a representative of the Romanian Ministry of Environment and Forests participated at the events organized in Hungary connected to the Danube Day, handing over the **Danube Flag** held by Romania for one year after starting its journey in Ukraine.

**Events**

**October 2011**

Mon	Tue	Wed	Thu	Fri	Sat	Sun
26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

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# Funding opportunities

## ETC, IPA, CBC and ENPI CBC programmes

This table provides a list of all ETC programmes. Contact details and website links have been added as available to INTERACT. Should you want to add or comment any information, please contact us. INTERACT Point Vienna does not warrant or assume any legal liability or responsibility for the accuracy, completeness or usefulness of any information, product or process disclosed in or connected to this document.

Type	Programme	Website	JTS e-mail	Pillar I	Pillar II	Pillar III	Pillar IV
Transnational	Alpine Space	<a href="http://www.alpine-space.eu/">http://www.alpine-space.eu/</a>	<a href="mailto:jts@alpine-space.eu">jts@alpine-space.eu</a>	X	X	X	X
Transnational	Central Europe	<a href="http://www.central2013.eu/">http://www.central2013.eu/</a>	<a href="mailto:info@central2013.eu">info@central2013.eu</a>	X	X	X	X
Transnational	South East Europe	<a href="http://www.southeast-europe.net">http://www.southeast-europe.net</a>	<a href="mailto:jts@southeast-europe.net">jts@southeast-europe.net</a>	X	X	X	X
CBC	Alpenrhein - Bodensee - Hoahrhein	<a href="http://www.interreg.org/">http://www.interreg.org/</a>		X	X	X	X
CBC	Austria - Czech Republic	<a href="http://www.at-cz.eu/">http://www.at-cz.eu/</a>	<a href="mailto:office@at-cz.eu">office@at-cz.eu</a>	X	X	X	X
CBC	Austria - Germany (Bavaria)	<a href="http://www.interreg-bayaut.net/">http://www.interreg-bayaut.net/</a>	<a href="mailto:gts.interreg-bayaut@salzburg.gv.at">gts.interreg-bayaut@salzburg.gv.at</a>	X	X	X	X
CBC	Austria - Hungary	<a href="http://sk-at.eu/at-hu/">http://sk-at.eu/at-hu/</a>	<a href="mailto:at-hu.jts@vati.hu">at-hu.jts@vati.hu</a>	X	X	X	X

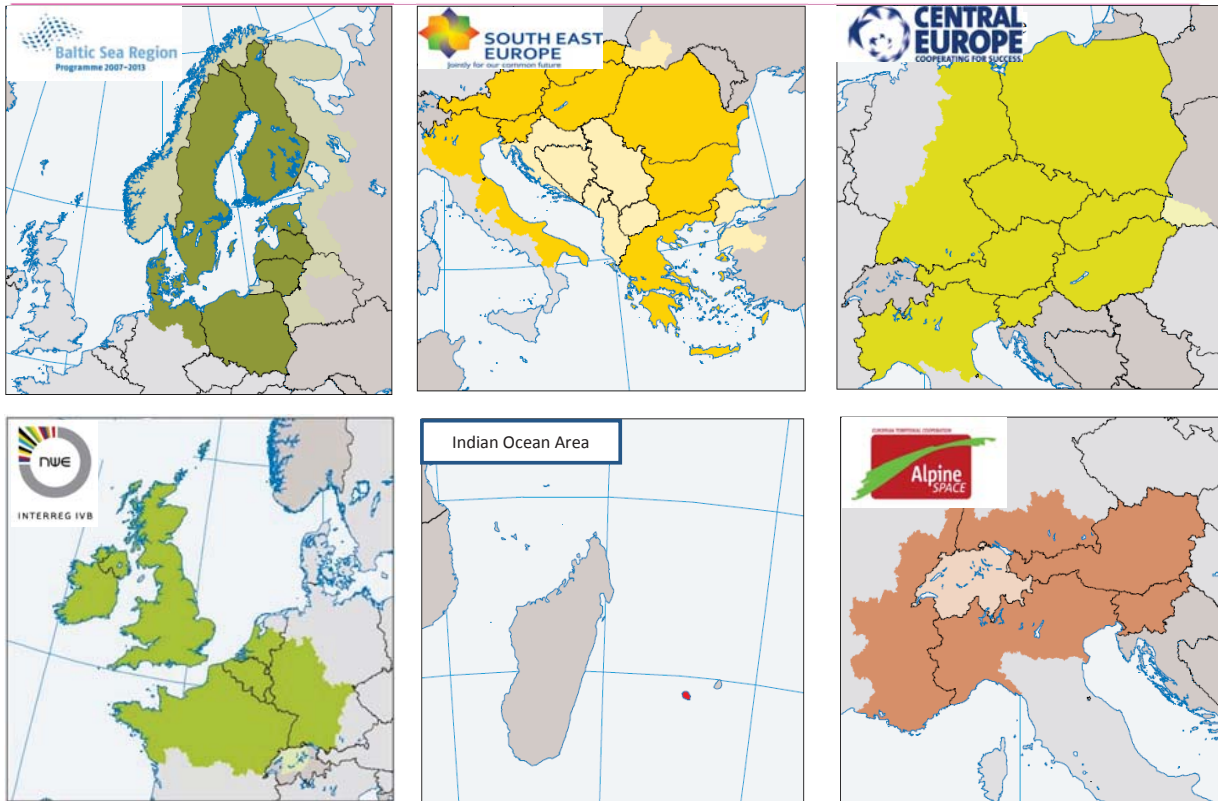


## Types of projects - EXAMPLES

- Strategic cooperation between universities/research institutes in neighboring countries
- Clusters / Triple helix
- Developing joint use of infrastructure and services or educational programmes
- Thematic cooperation (environment, transport, education, economic development, institutional capacity, etc.)
- Funds still available in some ETC programmes and the IPA-CBC programmes







Six out of 13 Transnational Cooperation Programmes



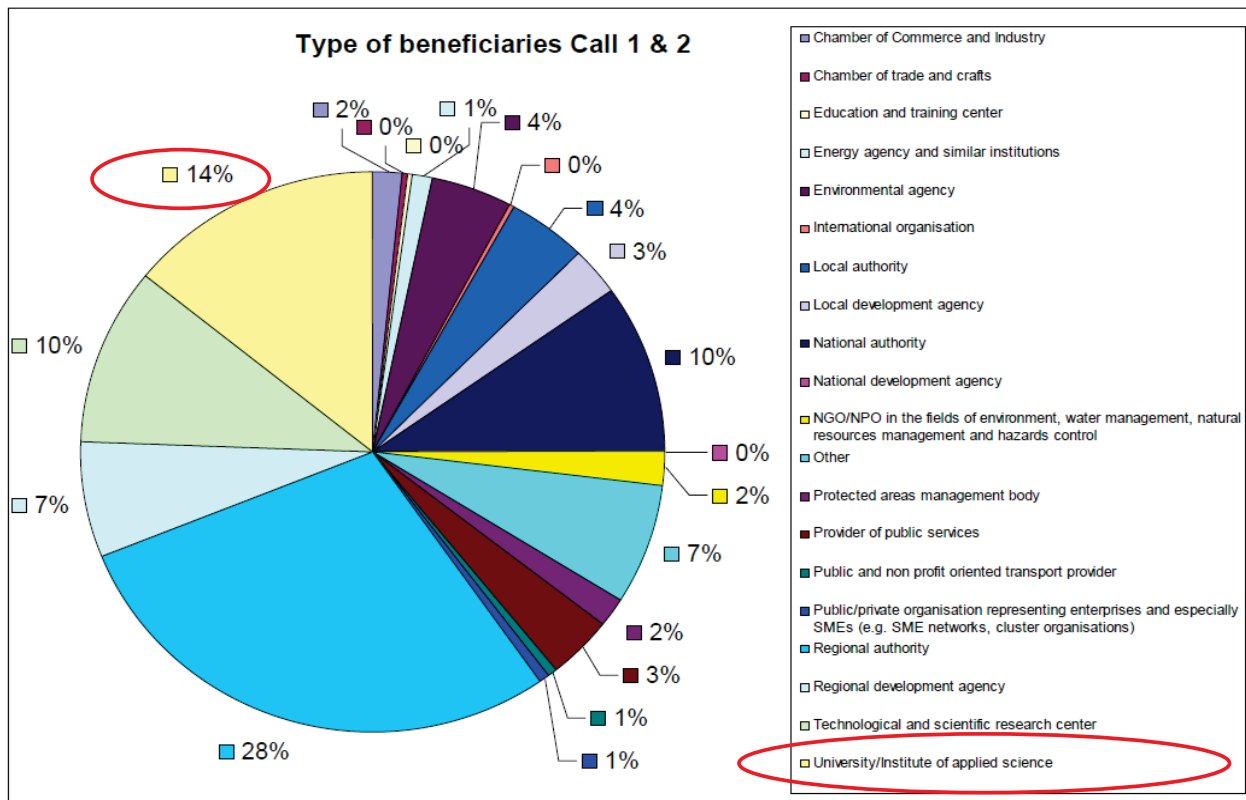
## Types of projects involving universities/research institutes

### EXAMPLES

- Develop transnational cooperation strategies
- Develop and test models for effective technology transfer to businesses
- Provide transnational innovation support tools and services for SMEs
- Human capital for the innovation process
- Respond to joint challenges like flooding or transport
- Last calls will be closed soon



## EXAMPLE - Alpine Space Programme



**keep** Knowledge and Expertise in European Programmes

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**PARTNERS**  
**STATISTICS**

Knowledge and expertise





**keep** Knowledge and Expertise in European Programmes

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**Keywords**

- Agriculture and fisheries and forestry
- Climate change and biodiversity
- Clustering and economic cooperation
- Community integration and common identity
- Construction and renovation
- Cooperation between emergency services
- Coastal management and maritime issues
- Cultural heritage and arts
- Demographic change and immigration
- Education and training
- Energy efficiency
- Evaluation systems and results

**PROJECTS PER THEMES**

Theme	Percentage
Economic Development	33.2%
Environment and Climate Change	30.8%
Quality of Life	25.2%
Accessibility	10.8%



- The proposed total budget for ETC is 11,7 billion EUR (2007-2013: 7,8 billion).
- 73% of the total funding of ETC for cross-border programmes, 21% for transnational and 6% for interregional.
- The proposed co-financing rate is 75%.
- All cross-border and transnational programmes shall choose up to 4 thematic objectives out of 11.



1. strengthening **research, technological development and innovation**;
2. enhancing access to, and use and quality of, information and **communication technologies**;
3. enhancing the **competitiveness of small and medium-sized enterprises**, the agricultural sector (for the EAFRD) and the fisheries and aquaculture sector (for the EMFF);
4. supporting the shift towards a **low-carbon economy** in all sectors;
5. promoting **climate change adaptation**, risk prevention and management;
6. **protecting the environment** and promoting **resource efficiency**;
7. promoting **sustainable transport** and removing bottlenecks in key network infrastructures;
8. promoting **employment** and supporting **labour mobility**;
9. promoting **social inclusion** and combating poverty;
10. investing in **education, skills and lifelong learning**;
11. enhancing **institutional capacity** and an efficient public administration.



## Stronger role for research and innovation

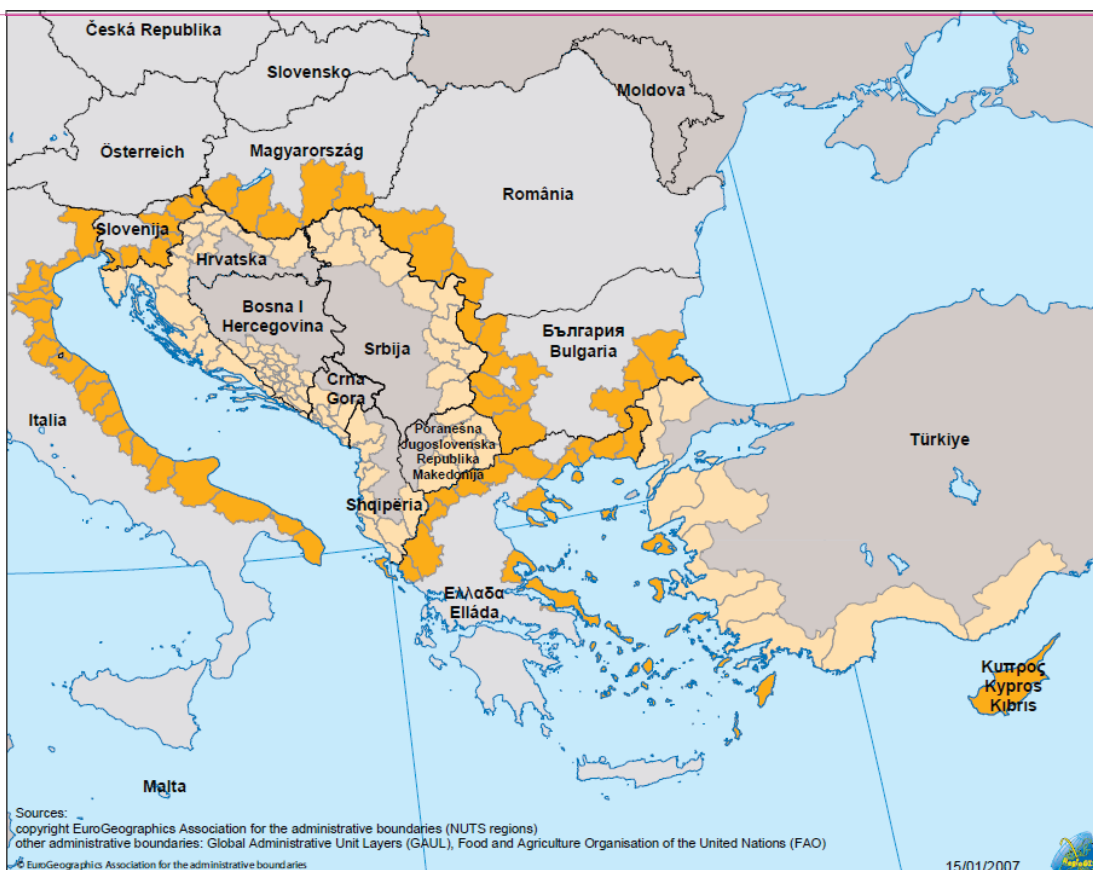
- All programmes should be aligned with the EU 2020 strategy and need to describe their strategy for contributions.
- Cross-border cooperation should (among others) aim to tackle common challenges in border-regions such as ... *'the development of cross-border research and innovation facilities and clusters, ... and cooperation among universities.'* (Preamble of the draft ETC Regulation).
- Transnational cooperation: can support the implementation of macro-regional strategies.
- Interregional cooperation should (among others) *foster cooperation between innovative research-intensive clusters and exchange between researchers and research institutions based on 'Regions of Knowledge' and 'Research Potential in Convergence and Outermost Regions'* currently under FP7 (Preamble of the draft ETC Regulation).





## What do you want to do?

- Further developing strategic intelligence - strengthening networks within the EUSDR:
  - Transnational cooperation areas: One programme covering the Danube macro-region?
  - More flexibility to spend money outside the cross-border and transnational programme areas.
- From smart specialisation to smart cooperation: Complementary / synergetic specialisation in a cross-border or transnational context.
- Combine funding sources: e.g., to develop triple helix cooperation, jointly used infrastructure, joint research programmes, etc.
- Potential role for the EUSDR Priority Area Coordinators in ETC:
  - Involvement in programming (design of programmes)
  - Involvement in project assessment
  - Clustering of existing projects ...
- Development of programmes and strategic projects starts soon!





## Adriatic

Hungary - Croatia

Hungary - Serbia

Romania - Serbia

Bulgaria - former Yugoslav Republic of Macedonia

Bulgaria - Turkey

Bulgaria - Serbia

Slovenia - Croatia

Greece - Albania

Greece - former Yugoslav Republic of Macedonia

SEE transnational programme (IPA participation)

MED transnational programme (IPA participation)



## Types of projects involving universities/research institutes

### EXAMPLES

- Increasing cross-border learning and joint curricula
- Provide cross-border innovation support services for SMEs/models for economic development
- Development of more resistant corn hybrids
- Respond to joint challenges like flooding or water quality
- Developing innovative methods for energy efficiency
- Innovative cross-border survey on geothermal drillings

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Transnational	South East Europe	<a href="http://www.southeast-europe.net">http://www.southeast-europe.net</a>	<a href="mailto:jts@southeast-europe.net">jts@southeast-europe.net</a>	X	X	X	X
IPA CBC	Bulgaria - Serbia	<a href="http://www.ipacbc-bgrs.eu/eng">http://www.ipacbc-bgrs.eu/eng</a>		X	X	X	X
IPA CBC	Bulgaria - Turkey	<a href="http://www.ipacbc-bgrtr.eu/eng">http://www.ipacbc-bgrtr.eu/eng</a>		X	X	X	X
IPA CBC	Bulgaria - former Yugoslav Republic of Macedonia	<a href="http://www.ipa-cbc-007.eu/en/">http://www.ipa-cbc-007.eu/en/</a>	<a href="mailto:jtsipakyustendil@gmail.com">jtsipakyustendil@gmail.com</a>	X	X	X	X
IPA CBC	Hungary - Croatia	<a href="http://www.hu-hr-ipa.com/">http://www.hu-hr-ipa.com/</a>	<a href="mailto:info@hu-hr-jts.com">info@hu-hr-jts.com</a>	X	X	X	X
IPA CBC	Hungary - Serbia	<a href="http://www.hu-srb-ipa.com/">http://www.hu-srb-ipa.com/</a>	<a href="mailto:info@hu-srb-jts.com">info@hu-srb-jts.com</a>	X	X	X	X
IPA CBC	IPA Adriatic	<a href="http://www.adriaticipacbc.org/">http://www.adriaticipacbc.org/</a>	<a href="mailto:info@adriaticipacbc.org">info@adriaticipacbc.org</a>	X	X	X	X
IPA CBC	Romania - Serbia	<a href="http://www.romania-serbia.net/">http://www.romania-serbia.net/</a>	<a href="mailto:ipacbc@brct-timisoara.ro">ipacbc@brct-timisoara.ro</a>	X	X	X	X
IPA CBC	Slovenia - Croatia	<a href="http://www.si-hr.eu/start_en/">http://www.si-hr.eu/start_en/</a>	<a href="mailto:jts-si-hr.svlr@gov.si">jts-si-hr.svlr@gov.si</a>	X	X	X	X



[www.interact-eu.net](http://www.interact-eu.net)



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### ETC/INTERREG Agenda

November 2011

M	T	W	T	F	S	S
01	02	03	04	05	06	
07	08	09	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	01	02	03	04
05	06	07	08	09	10	11

### Wednesday 09 November

Overview

No events planned for this day.

#### More About

- Programme Management
- Project Management
- Financial Management
- Synergies and Capitalisation
- Communication
- Evaluation
- IPA CBC
- EGTC
- KEEP
- Europe 2020
- DG Regio Mailings
- Regulatory Framework

#### News

- DG Regio publishes "European Ter... The European Commission - DG Reg...
- First European Project Slam - Pr... Luxembourg organised a side even...

#### Macro-Regions

**EU Macro-Regional Strategies**  
In this section you will find useful information on European Macro-Regional Strategies and related INTERACT support

#### Events

- Alignment of Funding in Implemen... 10.11.2011 Stockholm, Sweden
- ETC Strategic Approach | Day 1 S... 10.11.2011 Rome, Italy

#### ENPI CBC

"Main Management Challenges for ... INTERACT ENPI organised a confer...  
2nd meeting of Audit and Finance...  
2nd meeting of Audit and Finance...

#### Territorial Cooperation

European Territorial Cooperation...  
"More growth and jobs for all regions and cities of the European Union." This is the message which is at the heart of the programming period 2007-2013 for Cohesion Policy and its instruments. Europ...

#### INTERACT Focus 2011

INTERACT Focus 2011: Territorial...  
INTERACT's work plan for 2011 addresses two main focus areas: current challenges for the Territorial Cooperation community and preparing the ground for the future of European Territorial Co...



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