



DRC Danube Rectors' Conference a network for bio-based economy partnerships in the Danube Region

Doru C. Pamfil
DRC President

Knowledge Based Bio-Economy (2005)

Bio-based economy (2012)

Bioeconomy (2014)



DRC
Danube Rectors' Conference



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Production of renewable biological resources and conversion to food/ feed/bio-based products and bioenergy

Food/ Feed



Natural Resources



Energy



Climate Change





The Bioeconomy Strategy and Action Plan

STRATEGY

- Ensuring food security
- Managing natural resources sustainably
- Reducing dependence on non-renewable resources
- Mitigating and adapting to climate change
- Creating jobs and maintaining European competitiveness
- Coherent policy
- Investment in knowledge, innovation and skills
- Participative governance and informed dialogue with society
- New infrastructures and instruments

ACTION PLAN

INVESTMENTS IN RESEARCH, INNOVATION AND SKILLS

REINFORCED POLICY INTERACTION AND STAKEHOLDER ENGAGEMENT

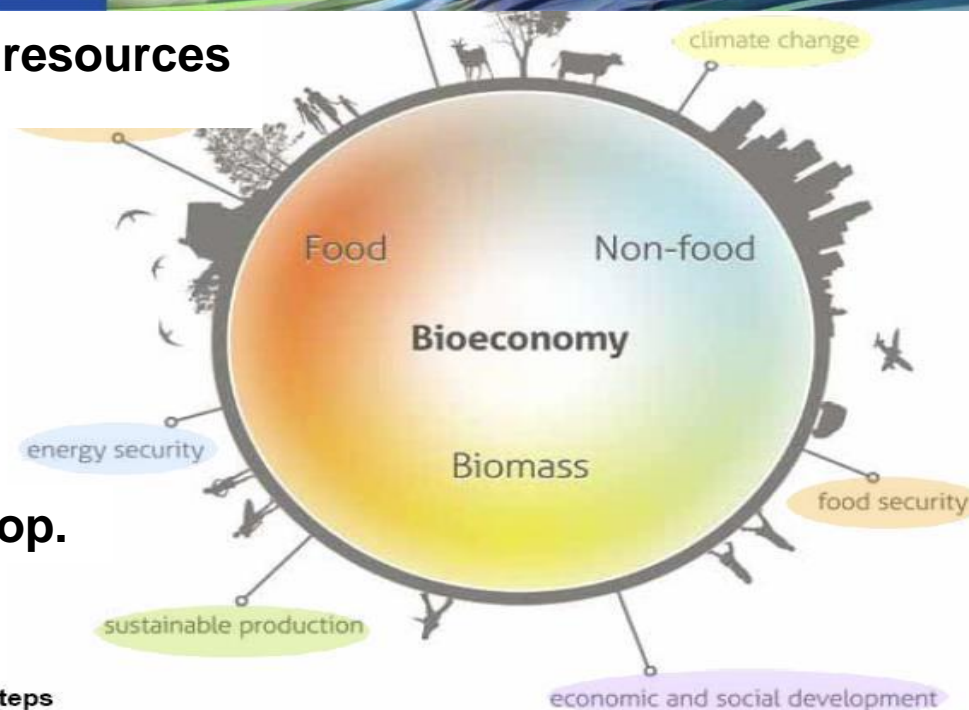
ENHANCEMENT OF MARKETS AND COMPETITIVENESS IN BIOECONOMY SECTORS



A Bioeconomy for Europe

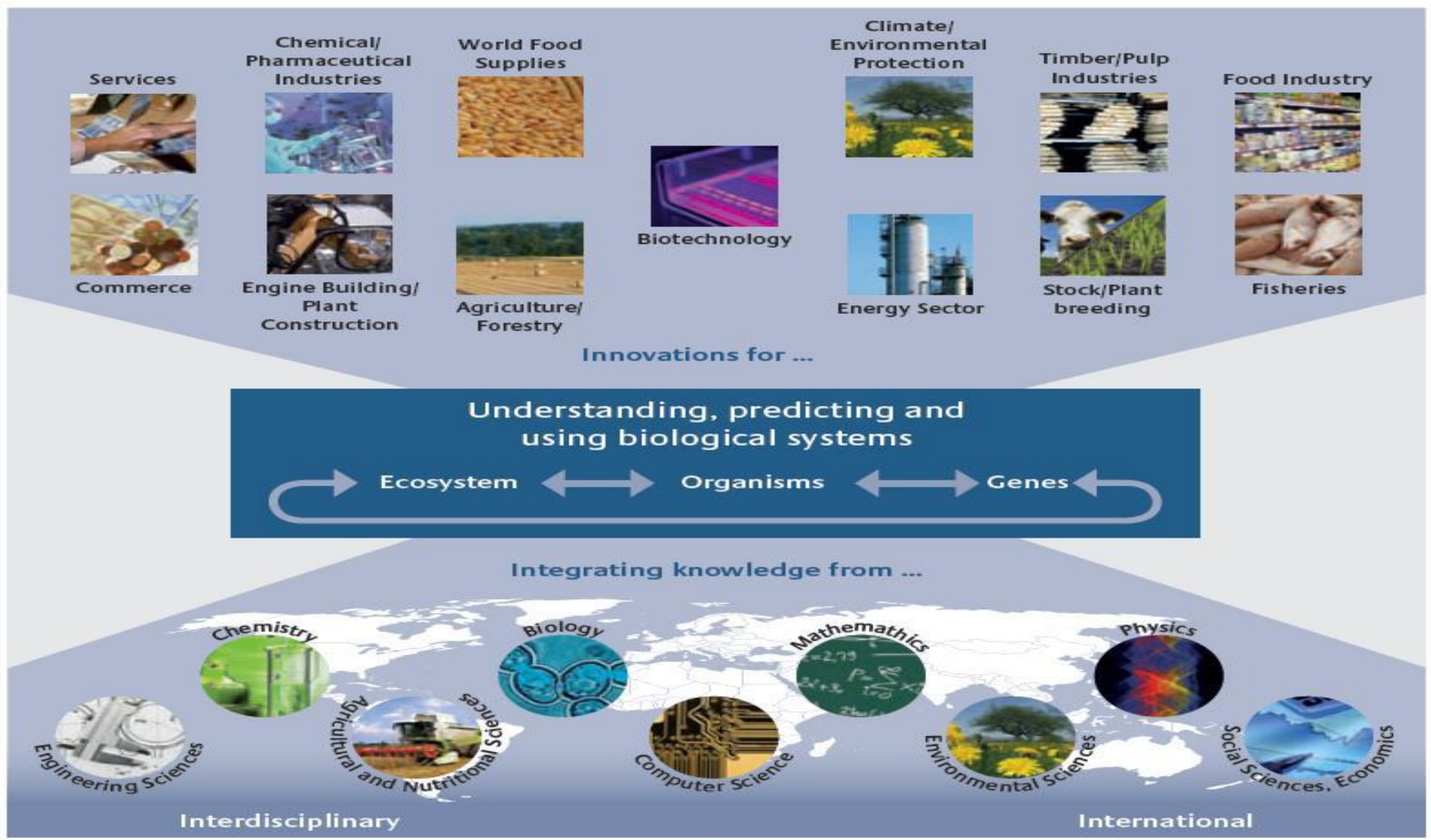
Using resources from land and sea for a post-petroleum economy

1. Sustainable management of natural resources
2. Sustainable productions
3. Improving public health
4. Mitigating climate change
5. Integrating & balancing social develop.
6. Global sustainable development

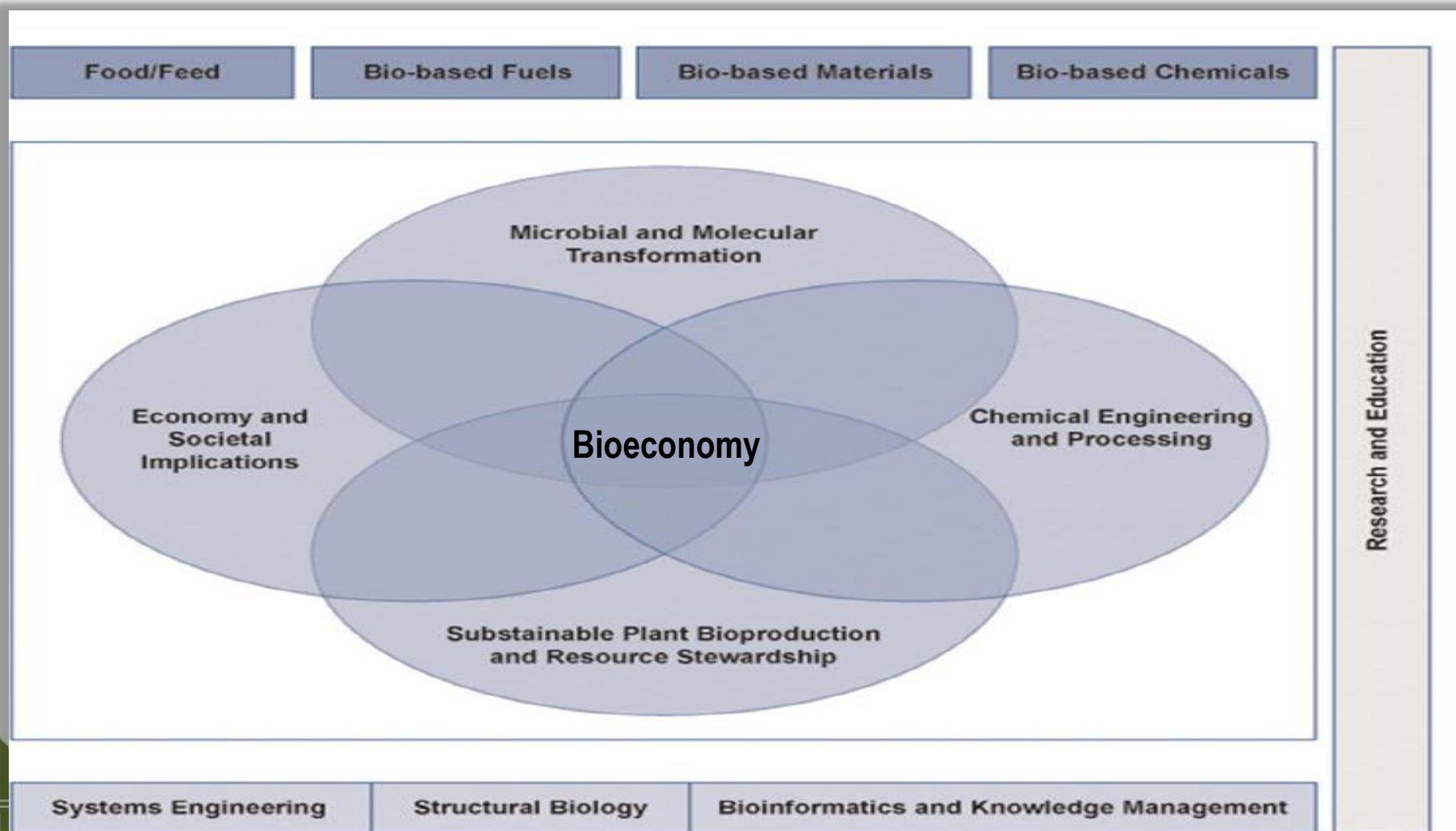


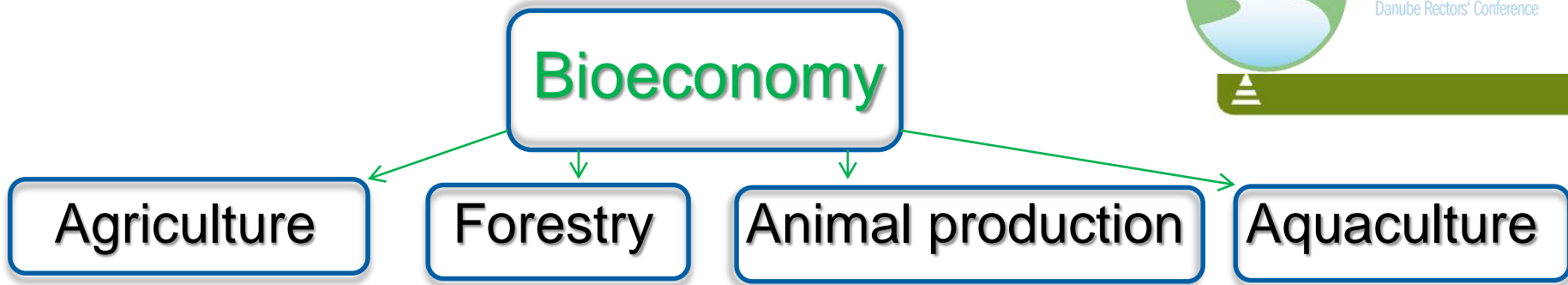
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Understanding Bioeconomy system



Understanding Bioeconomy system





Progress in life sciences > Bioeconomy the most dynamic

Large market > 2 trillion euro (2014)

Large employers > 23 million (2014)

Large labor force > 9% (2014)





European Bioeconomy

National level

Regional level

Danube Bioeconomy



More cooperative approach

Education

Research

Innovation

Investments

**European Research Area
European Higher Education Area**

Universities

drivers of education, research & innovation > 600 years

R&D expenditure in the EU (2015):

over 272 Billion € > HEI: **59 Billion € (23%)**

- 2,906 Higher Education Institutions (EUA - 828)
- 1,364 research universities > 850 awarding PhD
- HEI: employ 700.000 scientist (44%) out of 1,600.000 European R&D personnel



Academic networks in the Danube Region



- Danube Rectors' Conference
- DAC – Danube Academic Conference
- ICA – CASEE – European Life Science Universities
- DANET – master, doctorate
- DSNR - research
- CEEPUS – mobility
- INTERACT – development
- KNOWLEDGE CLUSTERS
- etc.....
- **DANUBE INCO.NET**





Danube Rectors' Conference

- **1983 Vienna** - Danube Rectors' Conference established by rectors from the universities of Ulm, Linz, Vienna & Budapest
- **2013** Registered in Brussels with a headquarter in Vienna
- **2015- 2016 Presidency:**

President prof. Doru PAMFIL (Ro)

Vicepresident Prof. Jiří Balík (Cz)

Vicepresident Mag. Friedrich Faulhammer (Au)

Honorary president: Prof. Ferencz

Hudecz (Hu)



<http://www.drc-danube.org>



Danube Rectors' Conference



- Objectives:

- to raise the general level of academic performance in education, scientific research and innovation
- to promote mobility (students and teachers)
- multilateral cooperation in the Danube region
- support the Central European Exchange Program for University Studies (CEEPUS)
- cooperates on EUSDR with European Union institutions
- **an valuable partner for Danube inco.net**

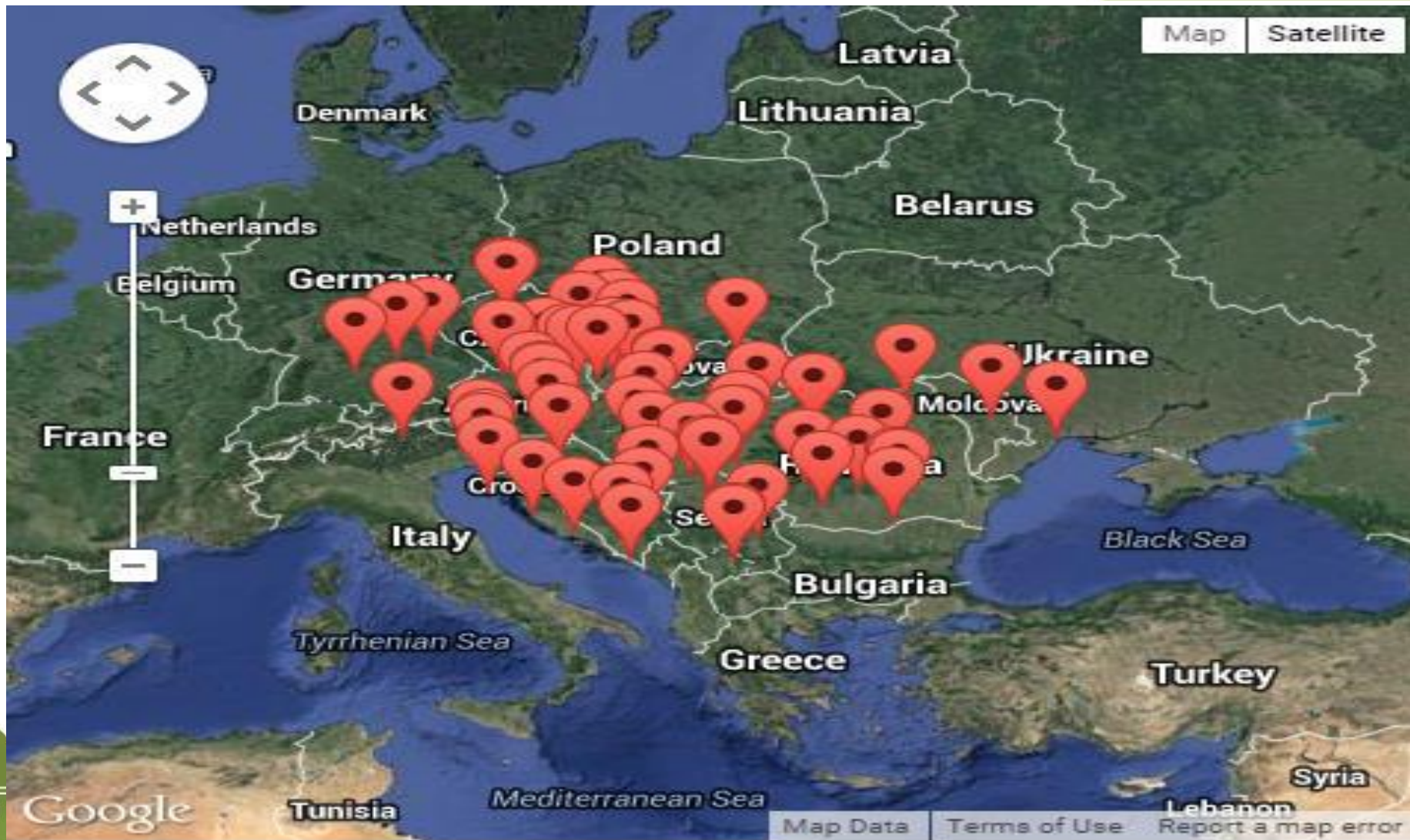
Danube Rectors' Conference

- **70 members** > a network of significant universities from
- **15 Danube countries - 10 EU and 5 non EU countries**
- EU members (10): Austria (7), Bulgaria (1), Czech Republic (6), Croatia (7), Germany (3), Italy (2), Hungary (6), Romania (18), Slovakia (6), Slovenia (3)
- Non EU members (5): Bosnia and Herzegovina (3), Serbia (), Ukraine (2), Moldova (1), Kosovo (1).
- **over 1.070.000 students**

Danube Rectors' Conference

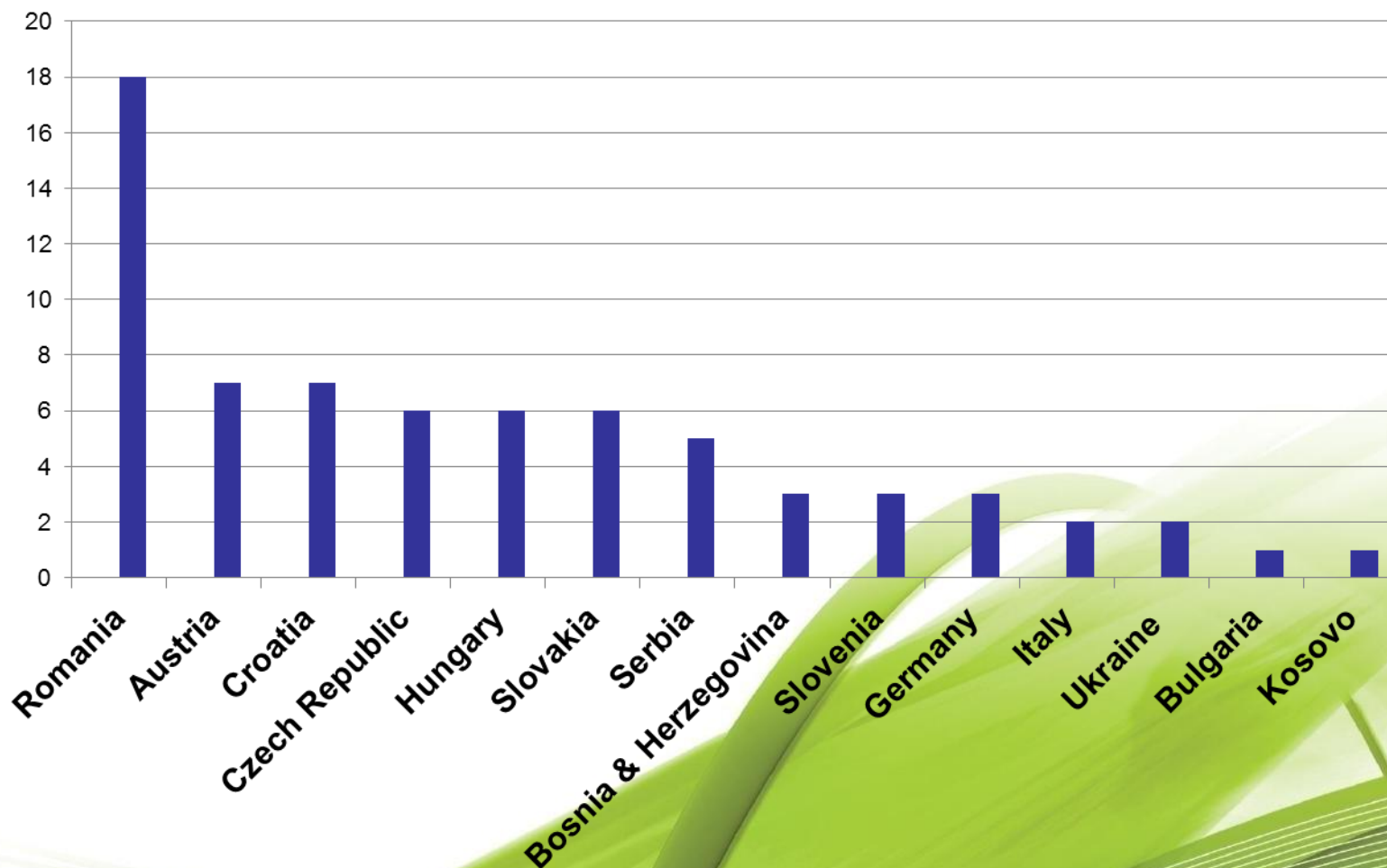


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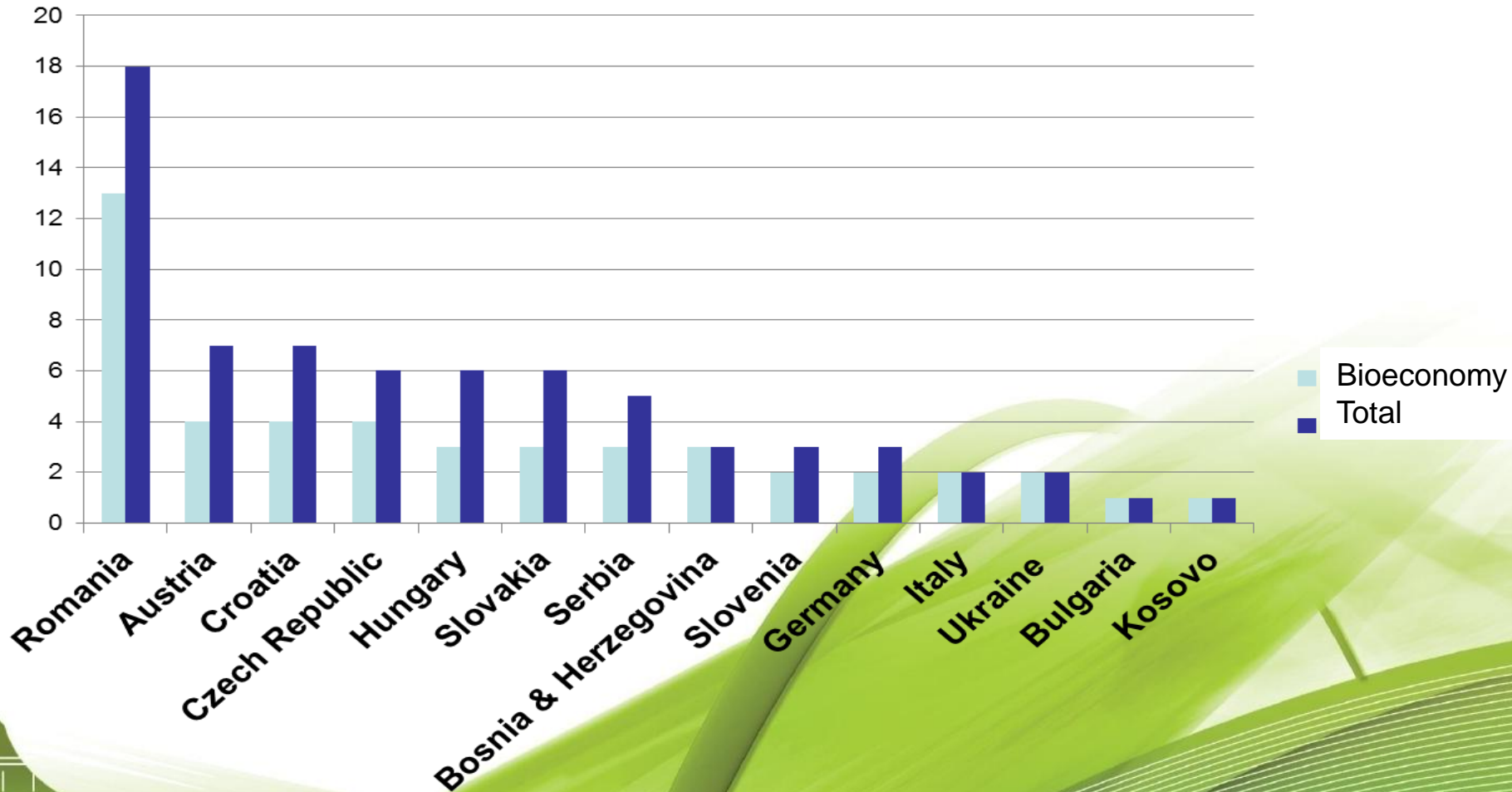


DRC a network of 70 Universities



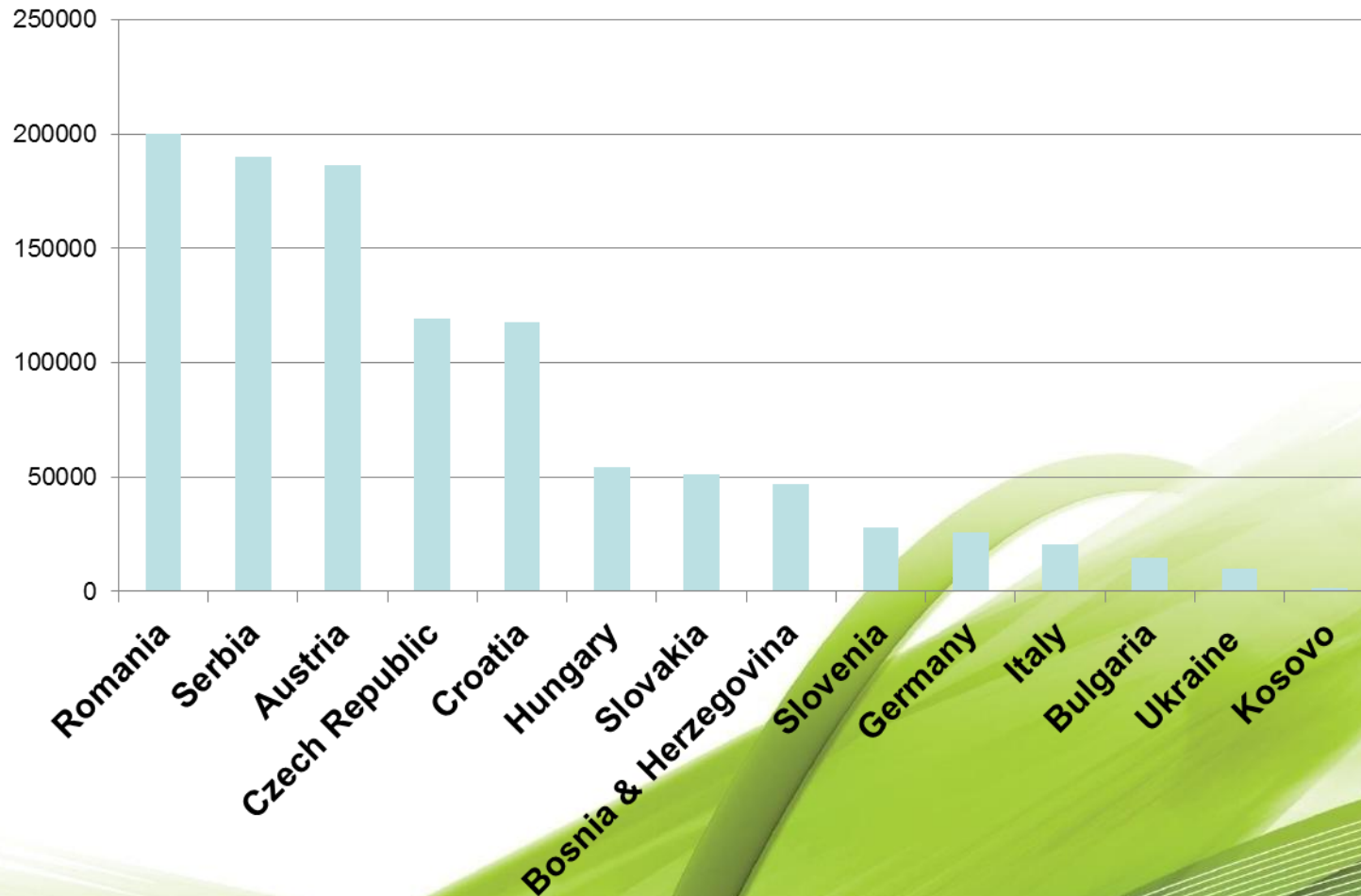


DRC a network with 50 Universities with Bioeconomy activity





DRC Universities enroll over 1 mill students



DRC Universities with Bioeconomy activity



Country	University	Students
		Total
Austria	Universität für Bodenkultur Wien	11.751
	Universität Wien	111.472
	Johannes Kepler Universität Linz	21.910
	Karl-Franzens Universität Graz	26.216
	Technische Universität Graz	1.934
	University of Leoben	4.235
	Donauuniversität Krems	8.641
Bosnia and Herzegovina	University of Mostar	16.000
	University of Sarajevo	28.251
	University of Tuzla	2.452
Bulgaria	University of Rousse	15.000
Croatia	Josip Juraj Strossmayer University	18.700
	University of Split	24.000
	University of Zagreb	72.480
	Center for Academic Development and Cooperation)	695
	Juraj Dobrila University of Pula	1.000
	University of Zadar	2.000
	University of Dubrovnik	1.968

DRC Universities with Bioeconomy activity



Czech Republic	Czech University of Life Sciences Prague	18.000
	Czech Technical University	23.363
	Palacký University	21.588
	Masaryk University	36.285
	Charles University Prague	50.992
	Tomas Bata University in Zlin	10.319
Germany	Katholische Universität Eichstätt	5.410
	Universität Ulm	10.000
	Universität Regensburg	15.774
Hungary	Szent Istvan University	16.000
	Eötvös Loránd University	25.738
	Semmelweis University of Medicine	10.675
	Corvinus University of Budapest	14.522
	University of Pécs	17.624
	Andrássy Gyula Universität Budapest	193
Kosovo	University of Prishtina	1.356
Italy	Free University of Bozen/Bolzano	3.362
	University of Trieste	16.989
Moldova	State Agrarian University of Moldova	4.850

DRC Universities with Bioeconomy activity



Country	University	Students
		Total
Romania	"Babes-Bolyai" University	37.421
	Vasile Goldis Western University of Arad	8.072
	SNSPA	6.266
	University of Pitești	9.970
	USAMV Cluj-Napoca	5.872
	Universitea de Vest – Timisoara	16.046
	University of Oradea	15.066
	Transilvania University of Brasov	19.124
	USAMV Bucharest	12.606
	University Stefan cel Mare Suceava	8.442
	University of Targu-Jiu	3.904
	University of Architecture and Urbanism Bucharest	3.030
	University of Craiova	11.905
	University of Arad	6.038
	Polytechnical University of Timisoara	12.260
	USAMV Timisoara	6.844
Politehnic University Bucharest	25.352	

DRC Universities with Bioeconomy activity

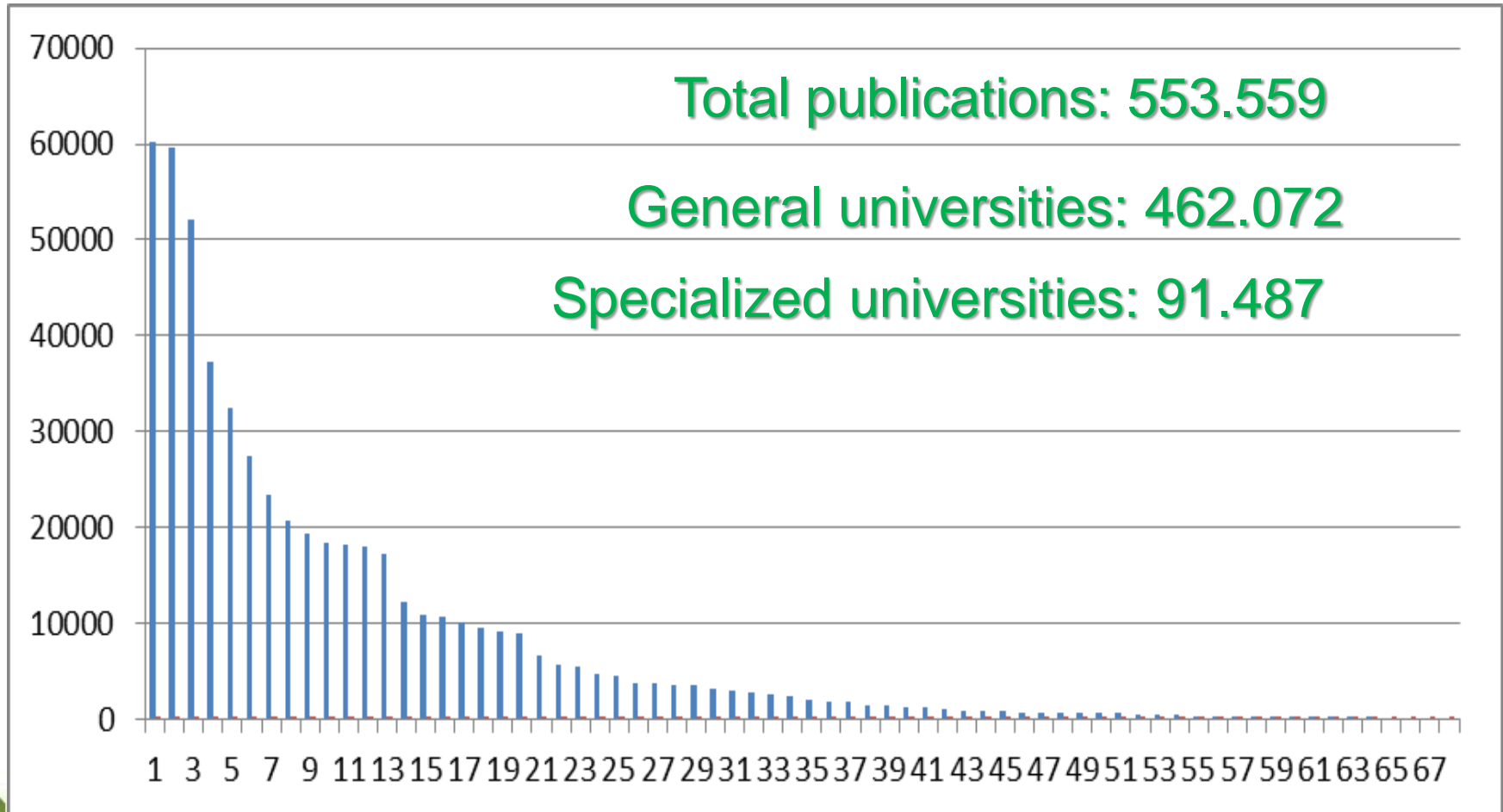


Serbia	University of Belgrade	87.551
	University of Novi Sad	48.000
	Megatrend University	26.000
	University of Nis	28.660
	University of Defense Serbia	0
Slovakia	Comenius University	26.624
	Trnava University	4.900
	Constantine the Philosopher University Nitra	10.028
	Alexander Dubček University of Trenčín	4442
	University of Prešov	12.600
	Slovak Agricultural University in Nitra	10.076
Slovenia	University of Maribor	22.165
	University of Nova Gorica	548
	University of Primorska	5.390
Ukraine	Odessa National I.I. Mechnikov University	9.003
	Uzhorod National University /Ukraine	7.800
DRC Total	70 Universities	> 1.070.083
	50 Universities with Bioeconomy activity	

DRC members scientific publications



SCOPUS (until V 2015)



DRC members scientific publications

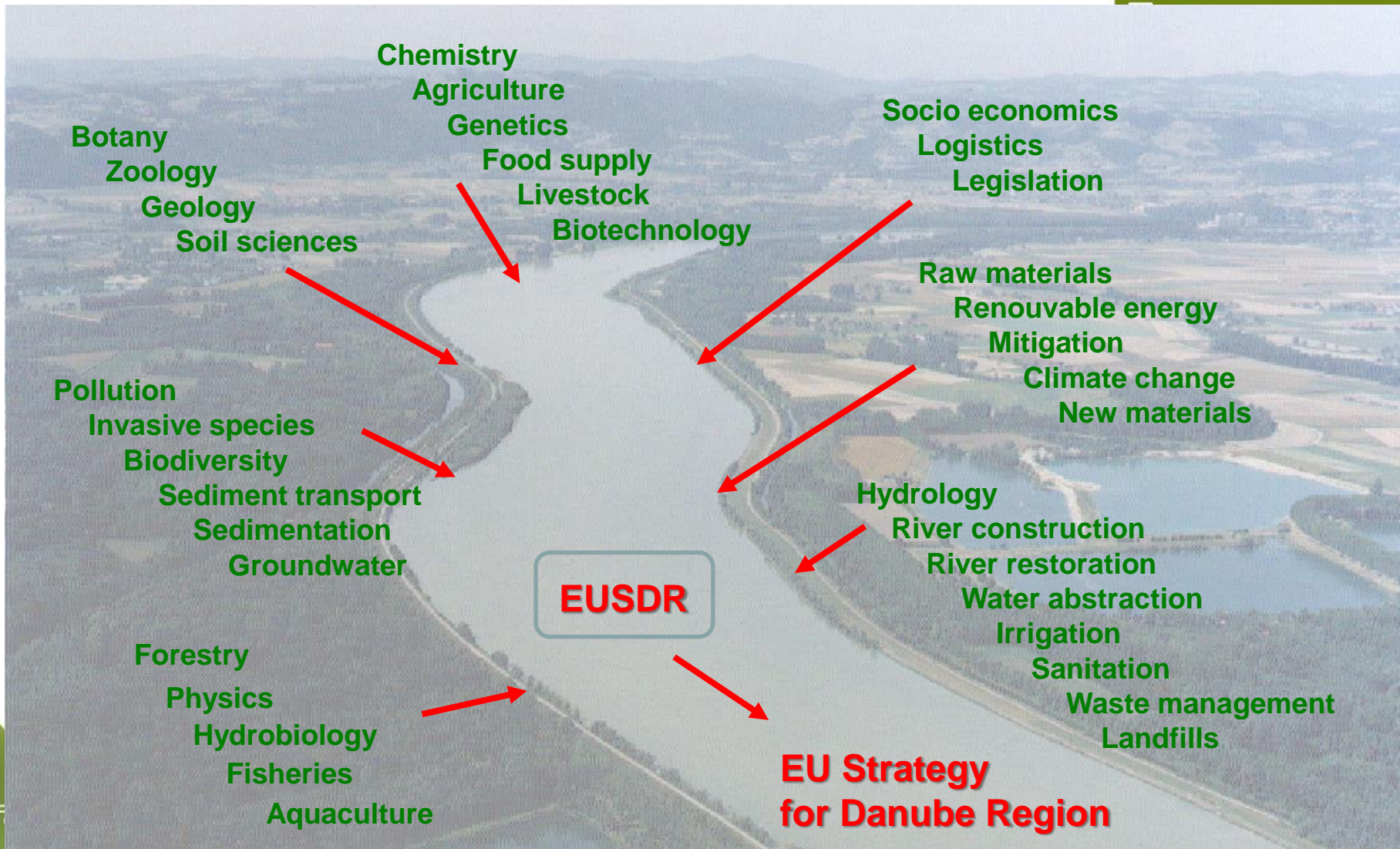


1	Charles University Prague	60102	1
2	Universität Wien	59626	2
3	University of Zagreb	52076	3
4	Universität Ulm	37330	4
5	University of Belgrade	32526	5
6	Universität Regensburg	27413	6
7	University of Trieste	23370	7
8	Karl-Franzens Universität Graz	20786	8
9	EötvösLoránd University	19411	9
10	Comenius University	18322	10
11	Czech Technical University	18254	11
12	Masaryk University	18093	12
13	Technische Universität Graz	17289	13
14	Johannes Kepler Universität Linz	12139	14
15	"Babes-Bolyai" University	10781	15
16	Palacký University	10757	16
17	University of Maribor	10170	17
18	Semmelweis University of Medicine	9523	18
19	University of Novi Sad	9142	19
20	Universität für Bodenkultur Wien	8939	20
21	University of Pécs	6552	21
22	University of Nis	5587	22
23	Polytechnical University of Timisoara	5519	23
24	Czech University of Agriculture	4718	24
25	University of Split	4533	25
26	University of Craiova	3757	26
27	SzentIstvan University	3674	27
28	University of Leoben	3505	28
29	JosipJuraj Strossmayer University	3455	29
30	Transilvania University of Brasov	3120	30

31	Universitea de Vest – Timisoara	2941	31
32	Tomas Bata University in Zlin	2725	32
33	University of Sarajevo	2601	33
34	Odessa National I.I. Mechnikov University	2481	34
35	Corvinus University of Budapest	1977	35
36	University of Oradea	1855	36
37	Free University of Bozen/Bolzano	1794	37
38	University of Nova Gorica	1448	38
39	University of Primorska	1401	39
40	Slovak Agricultural University in Nitra	1308	40
41	Center for Academic Development and Cooperation	1229	41
42	Katholische Universität Eichstätt	1109	42
43	University Stefan cel Mare Suceava	942	43
44	University of Pitești	906	44
45	USAMV Cluj-Napoca	840	45
46	Donauuniversität Krems	747	46
47	University of Prishtina	745	47
48	Constantine the Philosopher University Nitra	720	48
49	University of Tuzla	649	49
50	University of Rousse	600	50
51	Trnava University	561	51
52	University of Arad	533	52
53	USAMV Bucharest	508	53
54	University of Dubrovnik	397	54
55	University of Zadar	357	55
56	VasileGoldis Western University of Arad	355	56
57	University of Mostar	326	57
58	Banat USAMV "King Michael I of Romania", Timisoara	306	58
59	University of Prešov	303	59
60	University of Targu-Jiu	197	60
61	Alexander Dubček University of Trenčín	177	61
62	State agrarian University of Moldova	20	62
63	Andrássy Gyula Universität Budapest	8	63
64	University of Architecture and Urbanism Bucharest	4	64



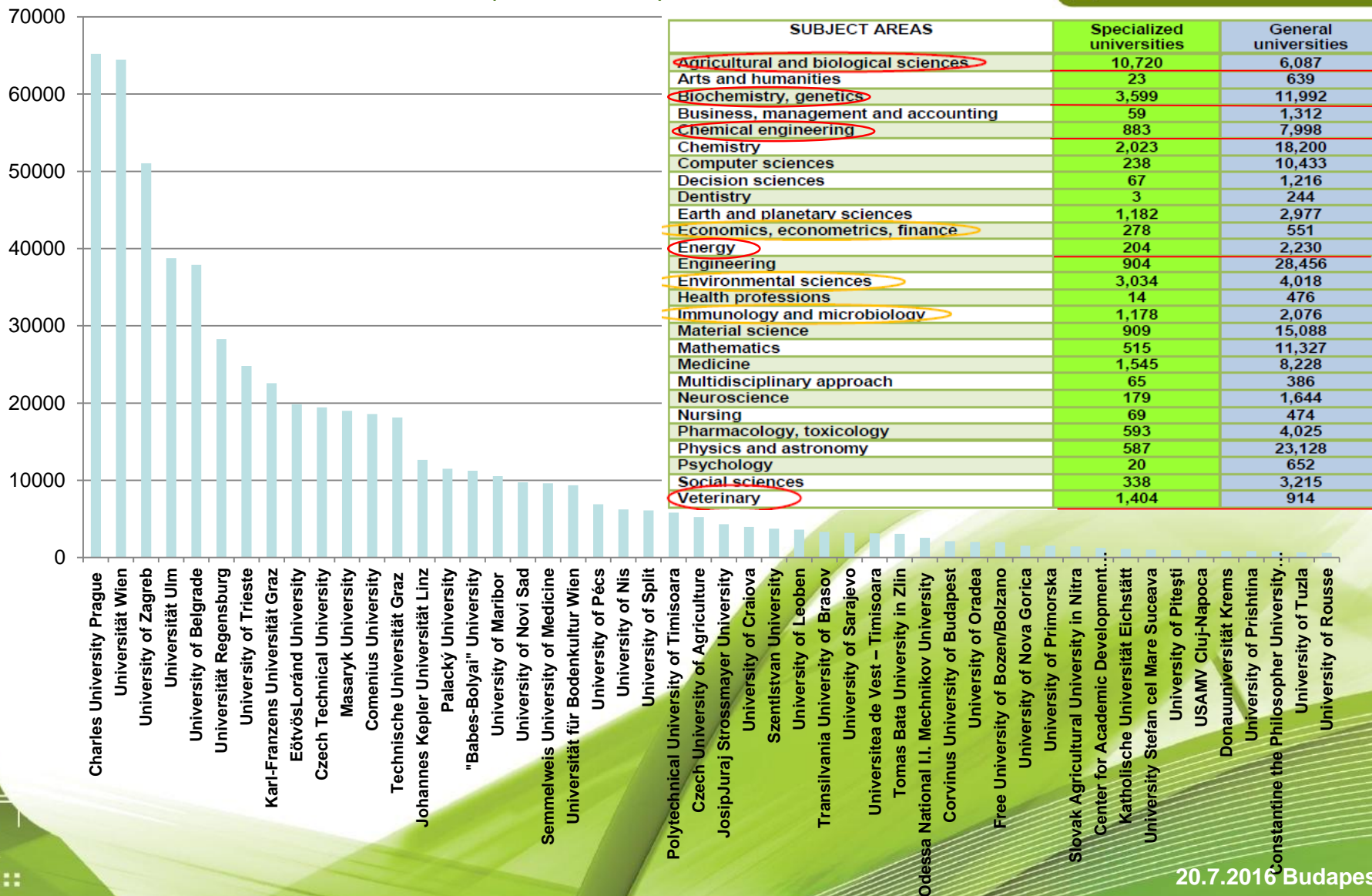
Bioeconomy activity of DRC Universities



DRC bioeconomy scientific publications



SCOPUS (until 2015)



SUBJECT AREAS	Specialized universities	General universities
Agricultural and biological sciences	10,720	6,087
Arts and humanities	23	639
Biochemistry, genetics	3,599	11,992
Business, management and accounting	59	1,312
Chemical engineering	883	7,998
Chemistry	2,023	18,200
Computer sciences	238	10,433
Decision sciences	67	1,216
Dentistry	3	244
Earth and planetary sciences	1,182	2,977
Economics, econometrics, finance	278	551
Energy	204	2,230
Engineering	904	28,456
Environmental sciences	3,034	4,018
Health professions	14	476
Immunology and microbiology	1,178	2,076
Material science	909	15,088
Mathematics	515	11,327
Medicine	1,545	8,228
Multidisciplinary approach	65	386
Neuroscience	179	1,644
Nursing	69	474
Pharmacology, toxicology	593	4,025
Physics and astronomy	587	23,128
Psychology	20	652
Social sciences	338	3,215
Veterinary	1,404	914



ICA-CASEE network



- **22 members** > universities from regional network

ICA for Central and South Eastern Europe > CASEE

- active in sustainable ecological and economical development of the region (including Danube area)
- R&D single or in consortia in **266 projects**
- huge potential over **120,000 scientific papers** written by more than **40,000 authors** (Scopus 2014)
- Bioeconomy task force and program

CASEE Universities with Bioeconomy activity



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Mosonmagyaróvár, Maďarsko - Mapy Google - Windows Internet Explorer

http://maps.google.com/

Soubor Úpravy Zobrazit Oblíbené položky Nástroje Nápověda

Oblíbené položky Galerie oblastí Web Slice no

Mosonmagyaróvár, Maďarsko - Mapy Google

+ Vy Web Obrázky Videa **Mapy** Zprávy Nákupy Gmail Další

Přihlásit se

Google

United Kingdom, Nederland (Netherlands), Belgie (Belgium), Deutschland (Germany), Österreich (Austria), Schweiz (Switzerland), France, Italie (Italy), Bosna i Hercegovina (Bosnia and Herzegovina), Srbija (Serbia), Kosovo (Kosovo), Maďarsko (Hungary), Polska (Poland), Česka republika (Czech Republic), Slovensko (Slovakia), Rumunsko (Romania), Bulharsko (Bulgaria), Ukrajina (Ukraine), Moldova, Belaruská republika (Belarus), Litva (Lithuania), Lotyšsko (Latvia), Estonsko (Estonia).

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DRC network



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Bulgaria



Czech Republic



Germany



Hungary



Austria



Italy



Romania



Ukraine



Croatia



Slovenia



Slovakia



Serbia





DRC network in Danube Region



DRC + DAC + CASEE + JRC partners for

Danube Common Data Platform and network accessible to decision-makers and other relevant stakeholders of the Danube Region

Related priority areas of the EUSDR:

PA 01 - Mobility – Waterways (coordinated by Austria and Romania)

PA 02 - Energy (coordinated by Hungary and the Czech Republic)

PA 04 - Water Quality (coordinated by Hungary and Slovakia)

PA 05 - Environmental Risks (coordinated by Hungary and Romania)

PA 06 - Biodiversity, landscapes, quality of air and soils (coordinated by Bavaria and Croatia)

PA 07 - Knowledge society and ICT (coordinated by Slovakia and Serbia)



DRC expectation 2020



- Support the development and implementation of the EU Strategy for the Danube region
- Strengthen education, research, innovation and University development in this region
- Develop joint educational, research and other projects: joint curricula, joint continuous educational offers, structural development, human resource development, QA, innovation, know-how-transfer, etc.
- Develop mobility projects for students and staffs
- Make an inventory of relevant R&D data and collaborations potential of the DRC network
- Enlarge the universities number and the stakeholders contacts



DRC Bioeconomy action plan

Considerations:

- Bioeconomy need specific education and trainings
- Focus on recreating appropriate skills
- Improve the image of bioeconomy sectors and opportunities
- Encourage research and innovation

Actions:

- Focus on education of the next generation of good technicians, workers, researchers, entrepreneurs, managers, traders, etc.
- Promote international education and trainings
- Encourage mobility
- Cross recognition of qualifications in the Danube region
- Bioeconomy as life long learning from school, university > working life
- Promote research, innovation and technology transfer
- Movement and understanding between stockholders group, academia, media, politicians, retailers, etc.



Danube Strategy Progress Report

Brussels, 8.4.2013
COM(2013) 181 final



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EU Commissioner for Regional Development, Johannes Hahn:

*“We have made a very good start. The Danube Strategy is already showing that by **working together we can have a far greater impact than if we try to tackle problems in isolation.** Now we need to step up a gear.”*

*“Ensure systematic embedding of the Strategy in EU, **national and regional programmes for the period 2014-2020**, especially European Structural and EN 10 EN Investment Funds, Horizon 2020, **using the expertise of Danube networks in programming and implementation**”*

Let's make the Bioeconomy a successful example !

Thank you for networking Bioeconomy



<http://www.drc-danube.org>

