

Trends in Higher Education in the Danube Region

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Summary

The report presents an overview of higher education in the Danube region. The document deals with the national context, circumstances in higher education systems and a presentation of actions promoting cooperation in higher education. Differences between countries in the region are analysed. The role of the Danube Rectors' Conference is discussed and its cooperation with PA7 of the EUSDR. Actions to support Ukrainian higher education institutions are presented.

1. Introduction

Higher education has been facing many challenges in the previous period such as overcoming the consequences of the pandemic, geopolitical tensions and the war in Ukraine. Higher education in the region has shown resilience and solidarity in these trying times.

The role of higher education in the EUSDR Priority Area 7 "Knowledge Society" is an important one. The strong cooperation between PA7 and the Danube Rectors' Conference (DRC) is a guarantee of the engagement of higher education in attaining the goals of the EUSDR.



The various factors affecting higher education in the Danube region will be discussed in the subsequent sections.

2. National context

Support for education at the national level may first be assessed by analysing governmental expenditure in terms of percent of the GDP. Table 1 shows the data for countries in the Danube region. The European Union average is 4.8%, which implies that about half of the Danube countries invest less in education, which is then also reflected in funding for higher education.

Table 1. World Bank data on government expenditure on education in 2018 and 2021 (Government expenditure on education, total (% of GDP) | Data)

	% of GDP		
Country	2018	2021	
Austria	5.2	5.1	
Bosnia & Herzegovina	3.9	4.1	
Bulgaria	4.0	4.7	
Croatia	3.9	4.1	
Czech Republic	4.3	4.8	
Germany*	5.0	4.5	
Hungary	4.6	4.7	
Moldova	5.5	6.3	
Montenegro	-	-	
Romania	3.3	3.3	
Serbia	3.6	3.3	
Slovakia	4.0	4.8	
Slovenia	4.9	5.4	
Ukraine	5.3	5.9	

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.

As higher education also entails research and development (R&D) activities, the corresponding data about R&D expenditure in the Danube countries is shown in Table 2. The EU average is 2.27% implying that most countries in the region do not allot sufficient funds for R&D. Such financing directly affects the R&D performance output of these countries. An increase in funding may be seen in the cases of Croatia and Slovenia, but the largest increase in support was registered in Czechia with a value of 3 % of the GDP.

The R & D potential of the Danube countries may be illustrated by a few indicators. The simplest one is the number of published scientific papers per country. The results for the period 2018 to 2023 is presented in Table 3. A steady increase may be seen. The effects of the pandemic seem to have been alleviated but may still appear in the future.



The degree of cooperation among/between Danube countries was analysed looking at scientific publications with joint authorship from the region. The number of bilateral or multilateral research cooperations resulting in papers shows two trends. The most desired collaboration partner for all Danube countries is Germany. The most common partnerships are between neighbouring countries such as Czechia and Slovakia or between Bosnia and Hercegovina with Serbia or Montenegro with Croatia. A table illustrating the extent of collaborative publications in 2023 is presented in Appendix I. Information on collaborative publications in the period 2017 – 2022 may be found in *Der Donauraum* 62 (3/4) 55-72.

Table 2. World Bank data on research and development expenditures in 2018 and 2021 (Research and development expenditure (% of GDP) | Data)

	% of GDP		
Country	2018	2021	
Austria	3.21	3.26	
Bosnia & Herzegovina	0.19	0.19	
Bulgaria	0.76	0.77	
Croatia	0.97	1.24	
Czech Republic	1.93	3.00	
Germany*	3.13	3.14	
Hungary	1.53	1.64	
Moldova	0.25	0.23	
Montenegro	0.36	0.36	
Romania	0.50	0.47	
Serbia	0.92	0.99	
Slovakia	0.84	0.92	
Slovenia	1.95	2.13	
Ukraine	0.47	0.38	

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.

The competitiveness and success of national academic and research organizations is best portrayed by analysing the performance of Danube countries in the R & D programmes of the European Commission.

It is well known that Eastern European countries underperform in framework programmes. Despite efforts to overcome this issue, the problem remains unresolved and elusive. Some countries have committed to reduce the gap and the results have not gone unnoticed (i.e. Poland).



Table 3. Number of published scientific papers in the Danube countries in the period 2018-2023 (Web of Science Core Collection)

Country	2018	2019	2020	2021	2022	2023
Austria	22712	24953	24231	26138	34138	34408
Bosnia &						
Hercegovina	775	806	1171	1278	1570	1492
Bulgaria	2902	3202	4374	4499	5818	6357
Croatia	5017	5567	6764	7324	9019	9208
Czechia	16734	18498	19670	21417	24658	24983
Germany*	146052	158829	149638	160402	204844	199493
Hungary	9456	10391	10632	11667	14514	14786
Moldova	331	390	445	446	545	630
Montenegro	346	431	579	602	670	640
Romania	9767	11312	13020	14570	18957	18918
Serbia	6344	6985	7087	7705	9205	9449
Slovakia	4560	5261	6829	7375	8038	8367
Slovenia	5023	5548	6048	6748	7372	7505
Ukraine	5381	5830	11630	12227	13640	13488

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.

A brief overview of three key indicators of performance is presented in Table 4. The success rate in the Horizon Europe programme reflects the capacity of the whole R & D sector of a country. The number of prestigious starting European Research Council (ERC) grants indicates the degree of support for outstanding younger researchers (mostly based in universities). Finally, the innovator status, as defined by the European Innovation Scorecard, indicates the focus on promoting and supporting research-driven innovation.

Most Danube countries show an above average success rate in the Horizon Europe programme indicating a high level of research quality. These results show that the R & D potential in many Danube countries is being hindered by limited resources.

Excluding Germany and Austria, the performance of Danube countries in the ERC programme is modest. Hungary implemented a programme for supporting outstanding young researchers to apply to the ERC. As a result, the number of awarded starting ERC grants in Hungary has increased significantly. This action may be seen as an example of good practice for others in the region.

Regarding the European Innovation Scorecard, Germany and Austria are designated with the rank Strong Innovator, Slovenia and Hungary as Moderate Innovator, while all others has been ranked as Emerging Innovator. These data show a clear divide between the Upper and Lower Danube countries.



Table 4. Horizon Europe (HE) success rate, number of ERC starting grants in the period 2007-2021 and innovative performance of the country according to the European Innovation Scorecard 2024 (Horizon Europe country profiles - European Commission)

	Success	No. of ERC	
	rate in HE	starting grants	Innovator
Country	(%)	(2007-2021)	status
Austria	20.63	166	Strong
Bosnia & Herzegovina	12.03	0	Emerging
Bulgaria	18.02	1	Emerging
Croatia	16.87	2	Emerging
Czech Republic	19.62	26	Moderate
Germany*	21.96	882	Strong
Hungary	18.88	29	Moderate
Moldova	20.12	0	-
Montenegro	11.74	0	Emerging
Romania	16.47	2	Emerging
Serbia	16.07	1	Emerging
Slovakia	19.57	1	Emerging
Slovenia	20.28	6	Moderate
Ukraine	14.75	0	Emerging

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.

The potential for innovation is also reflected in the number of patent applications, Table 5. These data show an impact of the pandemic with the numbers lower in 2021 compared to 2019.

The data presented in this section show the reality in which higher education institutions operate in the region. Even though the possibilities are limited in many Danube countries, the resilience and quality of higher education institutions enable the sector to be one of the main drivers of social and economic progress. National contexts may influence local outputs considerably. Universities that perform well tend to overcome these constrictions by developing partnerships with institutions abroad and by diversifying their sources of funding. Higher education systems and institutions are discussed in the next section.



Table 5. Number of patent applications by residents in 2019 and 2021 (<u>Patent applications</u>, <u>residents | Data</u>)

	No. of patent applications, residents		
Country	2019	2021	
Austria	2066	1872	
Bosnia & Herzegovina	45	53	
Bulgaria	186	165	
Croatia	195	77	
Czech Republic	765	541	
Germany*	46632	39822	
Hungary	427	433	
Moldova	85	64	
Montenegro	16	109	
Romania	881	772	
Serbia	168	138	
Slovakia	206	146	
Slovenia	255 (in 2018)	222	
Ukraine	2097	1302	

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.

3. Higher education systems

Even though the data presented above indicate modest support for higher education and R & D in the Danube region, the capacity and potential of higher education remain high. Universitas 21 is a ranking of national higher education systems across 50 countries which is based on four groups of indicators: resources, environment, connectivity and output. The ranking was carried out annually in the period 2012 – 2020. The Danube countries performed adequately, some quite well when the performance was evaluated relative to the GDP per capita. The results of the final ranking in 2020 are presented in Table 6.

The excellence of universities in the Danube region may be assessed by their presence in various rankings. Many of them are ranked well and play an important role in the European higher education area. The highest ranked universities in Danube countries according to the ARWU rankings are presented in Table 7. Although current discussions about academic excellence and academic evaluation are moving away from exclusively quantitative assessments such as the number of publications and impact factors, rankings have provided a means of benchmarking institutional performance and will continue to do so. The debate on university rankings in Europe is linked to redefining criteria for academic and research excellence and actions to reform how research and researchers are assessed. To this end the Coalition for Advancing Research Assessment (CoARA) was formed. The DRC is a member of CoARA.



Table 6. Universitas 21 ranking of higher education systems 2020 (<u>Previous U21 Rankings of National Higher Education Systems - Universitas 21</u>)

		Rank adjusted to per
Country	Rank	capita GDP
Austria	12	16
Bosnia &		
Herzegovina	-	-
Bulgaria	45	42
Croatia	43	35
Czech Republic	29	26
Germany*	16	24
Hungary	33	30
Moldova	-	-
Montenegro	-	-
Romania	44	46
Serbia	42	11
Slovakia	38	45
Slovenia	28	27
Ukraine	36	14

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.

Table 7. ARWU rankings - Top Danube universities in 2021 and 2024

Country	Top university	Rank 2021	Rank 2024
Austria	University of Vienna	151-200	101-150
Bosnia &			
Herzegovina	-	-	-
Bulgaria	Sofia University	901-1000	-
Croatia	University of Zagreb	601-700	401-500
Czech Republic	Charles University Prague	201-300	301-400
Germany*	University of Munich	48	43
	Eőtvős Loránd University Budapest	601-700	501-600
Hungary	University of Szeged		401-500
Moldova	-	-	-
Montenegro	-	-	-
Romania	Babeș-Bolyai University Cluj Napoca	801-900	-
Serbia	University of Belgrade	501-600	401-500
Slovakia	Comenius University Bratislava	801-900	901-1000
Slovenia	University of Ljubljana	501-600	501-600
	Taras Shevchenko National		
Ukraine	University-of Kyiv		901-1000

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.



The Danube Rectors' Conference plays an important role in regional academic cooperation and is an important asset for the implementation of the EUSDR. The interaction of DRC member institutions has led to various forms of cooperation and joint initiatives at the regional and European level. DRC actions such as the annual meeting, thematic summer school, as well as support mechanisms for young researchers promote academic solidarity and provide opportunities for the exchange of best practices and networking.

4. European University Initiative – European University Alliances

The European University alliances are a flagship initiative of the European Commission, envisioned in the European Strategy for Universities. These alliances are transnational and include universities of different mission, size and structure covering institutions all across Europe. The idea of the alliances is to enhance the performance of higher education institutions in Europe and facilitate the exchange and collaboration of students and staff. The alliances aim to strengthen the European Higher Education Area and provide innovative means of cross-border collaboration.

Universities in Danube countries have embraced this initiative and more than 100 universities are currently engaged, Table 8. Alliance member universities from the Danube region are listed in Appendix II. Less than a third of these universities are members of the DRC. This fact indicates the currently ongoing issue of so-called "network" fatigue. Namely, universities facing financial restrictions and staffing shortages are not able to engage in all the academic networks that are beneficial to them and opt for only a few that cover their basic needs.

For the time being, the alliances are project-based and financed. It remains to be seen how many of them will be maintained if the funding model is modified. As far as the European Commission's intentions regarding the alliances are concerned, the future is uncertain. The Commission has hinted that it would like to use the alliances as a model system of higher education in Europe. Such a move has its drawbacks, one being that it might lead to a two-tier European higher education area. University networks and associations are monitoring the development of European university alliances and will act to ensure that they serve the best interests of higher education in Europe.



Table 8. European University Alliances – Alliance member universities from Danube countries (European Universities alliances and their partners - European Education Area)

Country	First call	Second call	Third call	Total
Austria	5	7	2	14
Bosnia & Herzegovina	-	2	2	4
Bulgaria	-	5	5	10
Croatia	3	1	2	6
Czech Republic	2	3	3	7
Germany*	4	4	6	14
Hungary	3	5	-	8
Moldova	-	-	-	-
Montenegro	-	1	-	-
Romania	4	7	5	16
Serbia	1	1	1	3
Slovakia	-	3	3	6
Slovenia	1	1	2	4
Ukraine	-	-	-	-
Total	23	40	41	104
DRC members	10	13	8	29

^{*}The data for Germany refers only to the states of Baden-Württemberg and Bayern.

5. Erasmus+ Programme activities

The Erasmus+ programme has provided many opportunities for universities in the region to expand their cooperation with other higher education institutions in Europe and beyond, including the European University Initiative. The programme is divided into several key actions.

One of the main purposes of the programme is to enable mobility across Europe and beyond. These activities are defined through Key Action 1 mobility projects. The projects cover several categories: higher education, vocational education and training, school education, adult education, youth and sport. The report will focus on the first two even though higher education institutions may also be engaged in other categories.

Danube countries utilise the possibilities offered in the programme and hundreds of institutions participate allowing tens of thousands of students and staff to travel and work at other institutions. Erasmus+ funds cover the majority of mobilities realised by students and staff in most Danube countries. The number of mobility projects and the number of participating organisations in the categories of higher education and vocational education and training realised in 2023 are presented in Table 9. The numbers indicate that Key Action 1 is popular and attracts many higher education institutions.

The number of participants in the mobilities by country in the period 2018 – 2023 is given in Appendix IV. The effects of the pandemic may be seen in these data. The numbers drop during university lockdowns but have since increased.



Table 9. Erasmus+ programme 2023 – Key action 1 -Mobility projects in higher education (HE) and vocational education and training (VE&T) and participating organisations (<u>Factsheets and statistics on Erasmus+ - Erasmus+</u>)

Country	No. of mobility projects			rticipating sations
	HE	VE&T	HE	VE&T
Austria	113	108	121	250
Bulgaria	68	148	80	154-
Czechia	81	196	127	203
Croatia	62	102	62	116
Germany*	463	718	599	1075
Hungary	42	146	42	299
Romania	119	297	119	378
Serbia	44	37	44	38
Slovakia	50	177	62	164
Slovenia	71	57	115	61

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern

Another funding opportunity for Danube countries is the Central European Exchange Program for University Studies. CEEPUS is a multilateral university exchange program in the extended Danube region that is based on an international agreement. In the period 1995 – 2023, more than 82 000 academic mobilities were realised. More information about CEEPUS may be found at CEEPUS (2024.37.24).

Various types of cooperation are realised through Erasmus+ Key Action 2. The cooperation projects implemented by institutions of higher education and vocational education and training realised in Danube countries in 2023 are presented in Table 10. The level of engagement in these projects is also high.

Table 10. Erasmus+ programme 2023 – Key action 2 - Cooperation projects in higher education (HE) and vocational education and training (VE&T) and participating organisations (<u>Factsheets and statistics on Erasmus+ - Erasmus+</u>)

Country	No. of cooperation projects		No. of participating organisations	
	HE	VE&T	HE	VE&T
Austria	17	25	89	94
Bulgaria	11	18	51	92
Croatia	6	11	61	63
Czechia	10	20	57	74
Germany*	54	72	233	219
Hungary	8	15	26	60
Romania	20	36	102	135
Serbia	3	8	28	38
Slovakia	8	16	40	54
Slovenia	10	10	71	86

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.



The Erasmus+ cooperation project priorities defined for 2023 were Digital transformation (DT), Environment and fight against climate change (E&FCC), Inclusion and diversity (I&D) and Participation in democratic life, common values and civic engagement (DEM). The project priority Digital transformation was the major focus of this generation of projects. The Erasmus+ cooperation project priorities also align well with the actions of PA8 of the EUSDR, namely the fostering of cooperation and exchange of knowledge between SMEs, creative industry, academia, the public sector and civil society in areas of competence in the Danube Region.

Table 11. Contribution to Erasmus+ programme 2023 priorities – Cooperation projects (Factsheets and statistics on Erasmus+ - Erasmus+)

<u> </u>				
Country	DT (%)	E&FCC (%)	I&D (%)	DEM (%)
Austria	85.60	70.60	79.50	45.90
Bulgaria	58.70	28.20	52.50	32.10
Croatia	60.20	27.90	19.90	18.90
Czechia	59.40	33.50	33.50	40.70
Germany*	71.80	65.30	66.40	44.90
Hungary	45.20	36.20	54.80	25.80
Romania	48.20	47.50	51.10	20.90
Serbia	59.10	22.70	25.20	28.10
Slovakia	76.20	72.90	34.60	9.50
Slovenia	42.00	38.90	55.70	18.60

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.

The Key Action 3 programme provides support to policy development and cooperation at the EU level, contributing to national reforms and modernisation in the fields of education, training, youth and sport. Jean Monnet projects are of particular interest for higher education institutions. Data regarding Jean Monnet projects in the region are provided in Table 12.

Table 12. Erasmus+ programme 2023 – Key action 3 – Jean Monnet projects (<u>Factsheets and statistics on Erasmus+</u> - Erasmus+)

Country	No. of projects	No. of participating organisations
Austria	2	3
Bulgaria	-	-
Croatia	3	5
Czechia	5	6
Germany*	11	13
Hungary	-	-
Romania	10	11
Serbia	4	5
Slovakia	4	4
Slovenia	4	4

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.



The values of the mobility, cooperation and Jean Monnet project grants are presented in Appendix III.

6. Solidarity with the academic community in Ukraine

The DRC and its members, as well as higher education institutions in Europe and worldwide, have supported their colleagues in Ukraine from the beginning of the invasion. Most institutions host Ukrainian students, and many provide support grants and reduced fees. Many of them host academic staff from Ukraine and have enhanced existing partnerships or established new ones with their Ukrainian counterparts. These actions fostering exchange and collaboration are supported by EU, national, local and even personal funding.

Ukraine's association to the Horizon Europe programme is one of the key support instruments. Ukraine continues to be a thematic priority in Erasmus+ calls for collaboration and 30 Ukrainian universities have joined a European University Alliance as associated partners by the end of 2024. The EU-funded MSCA4Ukraine fellowship scheme is another important support system. The project currently supports 125 fellows in European institutions. A second call has provided funding for 49 more.

Universities in Danube countries bordering Ukraine have been especially engaged in these actions.

7. Conclusions

Higher education institutions in the Danube region, as in other parts of Europe, are faced with many challenges. Despite increasingly difficult circumstances, the resilience and quality of higher education institutions enable the sector to be one of the main drivers of social and economic progress in the region. The interaction of DRC member institutions has led to various forms of cooperation and joint initiatives at the regional and European level. The Danube Rectors' Conference is an important partner of PA7 in the implementation of the EUSDR. Universities in Danube countries have embraced the European University Initiative and more than 100 universities are currently engaged in alliances. Higher education institutions in the Danube region continue to support their colleagues in Ukraine.

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The author would like to thank the DRC and its governance for many years of dedicated and fruitful cooperation.



Appendix

<u>Appendix I.</u> Collaborative scientific publications in 2023, numbers indicate percent of total papers published together with researchers from another country (<u>Web of Science Core Collection</u>)

	Α	в&н	BG	CRO	CZ	D	Н	ML	MN	RO	RS	SK	SI	UA
Austria		0.20	1.19	1.86	5.02	29.35	2.82	0.07	0.31	2.21	1.62	1.59	2.10	1.20
в&н	4.69		4.22	18.63	4.76	8.11	3.62	0.60	4.16	4.96	31.43	2.75	6.84	3.08
Bulgaria	6.45	0.99		5.11	6.64	13.72	5.65	0.25	1.65	6.67	5.30	3.82	3.07	4.50
Croatia	6.94	3.02	3.53		5.90	12.35	5.22	0.18	1.52	4.66	5.86	2.52	6.20	3.12
Czechia	6.92	0.28	1.69	2.17		15.61	3.53	0.07	0.41	3.13	2.15	7.62	2.36	2.26
Germany*	5.06	0.06	0.44	0.57	1.95		1.16	0.05	0.05	0.85	0.50	0.42	0.56	0.62
Hungary	6.56	0.37	2.43	3.25	5.96	15.63		0.16	0.68	5.60	2.62	2.84	2.16	3.14
Moldova	3.65	1.43	2.54	2.70	2.86	14.92	3.81		0.95	26.03	2.70	2.22	1.43	6.19
Montenegro	16.41	9.69	16.41	21.88	16.09	17.03	15.78	0.94		15.00	44.22	3.28	9.06	15.00
Romania	4.01	0.39	2.24	2.27	4.13	9.00	4.38	0.87	0.51		2.86	2.21	1.95	2.40
Serbia	5.88	4.96	3.57	5.71	5.69	10.50	4.11	0.18	3.00	5.73		3.34	5.32	2.24
Slovakia	6.55	0.49	2.90	2.77	22.76	10.12	5.02	0.17	0.25	5.00	3.78		3.47	5.67
Slovenia	9.63	1.36	2.60	7.61	7.86	14.84	4.25	0.12	0.77	4.92	6.70	3.86		1.43
Ukraine	3.05	0.34	2.12	2.13	4.19	9.14	3.45	0.29	0.71	3.37	1.56	3.51	0.79	

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.



<u>Appendix II.</u> Members of European University Alliances from the Danube region (<u>European Universities alliances and their partners - European Education Area</u>)

II.1. First generation European University Alliances

ist generation	Laropean oniversity rinances	
EU Uni	Member from Danube region	DRC
Alliance		member
4EU+	Charles University Prague (CZ)	
	Heidelberg University (BW)	
ARQUS	University of Graz (A)	✓
CHARMEU	Eőtvős Loránd University Budapest (H)	✓
CIVICA	Central European University (A)	
	National University of Political Studies	✓
	and Public Administration Bucharest	
	(RO)	
CIVIS	University of Bucharest (RO)	
	Paris Lodron University of Salzburg (A)	
	Eberhard Karls University Tübingen (BW)	
CONEXUS	University of Zadar (CRO)	✓
	Technical University of Civil Engineering	
	Bucharest (RO)	
EDUC	Masaryk University Brno (CZ)	✓
	University of Pécs (H)	✓
EPICUR	University of Natural Resources and Life	✓
	Sciences Vienna (A)	
	Albert Ludwig University of Freiburg	
	(BW)	
EU4ART	Hungarian University of Fine Arts	
	Budapest (H)	
EUGLOH	Ludwig Maximilian University Munich	
	(BAY)	
	University of Novi Sad (RS)	✓
EUTOPIA	University of Ljubljana (SI)	,
	Babeș-Bolyai University Cluj-Napoca (RO)	✓
SEA-EU	University of Split (CRO)	
UNITE!	Graz University of Technology (A)	✓
YUFE	University of Rijeka (CRO)	



II.2. Second generation European University Alliances

EU Uni	Member from Danube region	DRC
Alliance	Welliber Holli Dallube region	member
ATHENA	University of Maribor (SI)	√
Aurora	Palacký University of Olomouc (CZ)	
Alliance		
	University of Innsbruck (A)	
Circle U.	University of Belgrade (RS)	
E3HDDEC2	University of Vienna (A)	.
E ³ UDRES ²	Polytechnic University of Timoşoara (RO)	
	St. Pölten University of Applied Sciences (A)	
	Hungarian University of Agriculture and Life Sciences (H)	
EC2U	Alexander Iaon Cuza University Iași (RO)	
EELISA	Budapest University of Technology and Economics (H)	
	Polytechnic University of Bucharest (RO)	✓
	Friedrich-Alexander University Erlangen- Nürnberg (BAY)	
ENGAGE.EU	University of National and World Economy Sofia (BG)	
	Vienna University of Economics and Business (A)	
	University of Mannheim (BW)	
ENLIGHT	Comenius University Bratislava (SK)	✓
ERUA	New Bulgraian University Sofia (BG)	
	University of Konstanz (BW)	
EUniWell	Semmelweis University Budapest (H)	✓
EURECA-PRO	University of Leoben (A)	✓
	University of Petroșani (RO)	
EuroTeQ	Czech Technical University Prague (CZ)	✓
	Technical University of Munich (BAY)	
EuT	Technical University of Cluj-Napoca (RO)	✓
	Technical University of Sofia (BG)	
INVEST	Slovak University of Agriculture Nitra (SK)	✓
	University of Agribusiness and Rural Development	
	Plovdiv (BG)	
NeurotechEU	University of Debrecen (H)	
	Iuliu Haţieganu University of Medicine and	
	Pharmacy Cluj-Napoca (RO)	
RUN-EU	Voralberg University of Applied Sciences Dornbirn (A)	
	Széchenyi István University – University of Győr (H)	
T4E	Sofia University St. Kliment Ohridski (BG)	
ULYSSEUS	Management Center Innsbruck (A)	
	Technical University of Košice (SK)	
	University of Montenegro	
UNIC	University of Zagreb (CRO)	✓
UNITA	West University of Timoșoara (RO)	

^{*}Only German universities from the states Baden-Württemberg (BW) and Bayern (BAY), belonging to the Danube region, are listed.



II.3. Third generation European University Alliances

	1	
EU Uni Alliance	Member from Danube region	DRC
		member
ACE2EU	Carinthia University of Applied Sciences (A)	
	Ingolstadt University of Applied Sciences (BAY)	
	"Constantin Brâncuşi" University of Târgu Jiu	
A	(RO)	✓
Across	University of Craiova (RO)	<u> </u>
	"Angel Kanchev" University of Ruse (BG)	<u> </u>
	University of Nova Gorica (SI)	<u> </u>
ABTENNIC	University of Banja Luka (BH)	•
ARTEMIS	, , ,	
5	Ovidius University of Constanza (RO)	
BAUHAUS4EU	University of Architecture, Civil Engineering and	
	Geodesy (BG)	
CHALLENGE.EU	Offenburg University of Applied Sciences (BW)	
EMERGE	Matej Bel University (SK)	
EUNICoast	Burgas Free University (BG)	
	Euro-Mediterranean University (SI)	
	University of Dubrovnik (CRO)	
EUonAIR	Heilbronn University of Applied Sciences (BW)	
	Zagreb School of Economics and Management	
	(CRO)	
EUPeace	University of Mostar (BH)	√
	University of Sarajevo (BH)	√
	University of West Bohemia (CZ)	
HEROES	Mendel University in Brno (CZ)	
	University of Applied Sciences Deggendorf	✓
	(BAY)	
IN.TUNE	National University of Music Bucharest (RO)	
	University of Music and Performing Arts Vienna	
	(A)	
	University of Arts in Belgrade (RS)	
KreativEU	D. A. Tsenov Academy of Economics (BG)	
	University of South Bohemia	
	(CZ)	
	Trnava University (SK)	
	Valahia University of Târgoviște (RO)	
OpenEU	St. Cyril and St. Methodius University of Veliko	✓
	Tarnovo (BG)	
PIONEER	Tomas Bata University in Zlin (CZ)	✓
	University of Žilina (SK)	
SUNRISE	Džemal Bijedić University Mostar (BH)	
UNINOVIS	Würzburg-Schweinfurt University of Applied	
	Sciences (BAY)	

^{*}Only German universities from the states of Baden-Württemberg (BW) and Bayern (BAY), belonging to the Danube region, are listed.



<u>Appendix III</u>. Erasmus+ mobility, cooperation and Jean Monnet project grants 2023 (<u>Factsheets and statistics on Erasmus+ - Erasmus+</u>)

III.1. Erasmus+ programme 2023 – Key Action 1 - Mobility project grants in higher education (HE) and vocational education and training (VE&T)

Country	Mobility project grants (€)		
	HE	VE&T	
Austria	30 173 584	10 109 126	
Bulgaria	19 110 619	11 106 763	
Czechia	34 133 111	13 773 754	
Croatia	16 350 198	6 276 186	
Germany	194 447 817	76 906 123	
Hungary	19 560 694	18 695 944	
Romania	52 610 090	20 416 484	
Serbia	3 223 576	1 241 953	
Slovakia	20 944 436	9 605 616	
Slovenia	12 828 467	5 405 768	

III.2. Erasmus+ programme 2023 – Key Action 2 - Cooperation project grants in higher education (HE) and vocational education and training (VE&T)

Country	Cooperation project grants (€)			
	HE	VE&T		
Austria	43 734 036	3 955 666		
Bulgaria	3 350 000	2 880 000		
Croatia	1 670 000	1 912 104		
Czechia	3 160 000	2 910 000		
Germany	148 060 832	22 959 205		
Hungary	2 600 000	2 340 000		
Romania	7 675 404	12 516 511		
Serbia	901 148	641 915		
Slovakia	13 982 412	7 033 989		
Slovenia	4 027 526	1 543 405		

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.

III.3. Erasmus+ programme 2023 – Key Action 3 – Jean Monnet projects

Country	Project grant	Country	Project grant		
Austria	Austria 125 000		Austria 125 000 Hungary		-
Bulgaria	-	Romania	328 498		
Croatia	86 000	Serbia	130 500		
Czechia	115 750	Slovakia	195 455		
Germany*	5 126 195	Slovenia	187 000		

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.



<u>Appendix IV.</u> Erasmus+ programme – Key Action 1 - Participants travelling to and leaving a Danube country in the period 2017-2023 (<u>Factsheets and statistics on Erasmus+ - Erasmus+</u>)

Austria

Year	Travel	ling to the co	ountry	Leav	ing the cou	ntry
	Learners	Staff	Others	Learners	Staff	Others
2023	23374	7592	284	22093	5480	90
2022	20858	7150	0	17954	5143	0
2021	11938	1991	0	7771	1341	0
2020	9083	1524	0	7013	792	0
2019	16933	5341	0	14506	4414	0
2018	15174	4380	0	13529	3728	0
2017	13837	3787	0	12849	2921	

Bosnia and Hercegovina

Year	Travelling to the country	Leaving the country
	Learners & Staff	Learners & Staff
2023	1048	1831
2022	1184	1839

Bulgaria

Year	Travel	ling to the co	ountry	Leav	ing the cou	ntry
	Learners	Staff	Others	Learners	Staff	Others
2023	8476	4824	75	13258	7653	233
2022	14045	4141	0	16753	6785	0
2021	11089	3297	0	12712	4296	0
2020	3737	576	0	4822	1234	0
2019	10976	3393	0	13378	6105	0
2018	8425	2578	0	12171	4780	0
2017	7996	2507	0	10642	3860	0

Croatia

Year	Travelling to the country			Leav	ing the cou	ntry
	Learners	Staff	Others	Learners	Staff	Others
2023	11492	6880	286	10721	5201	179
2022	12940	5236	0	14171	4479	0
2021	8439	3181	0	7902	2304	0
2020	3692	644	0	3992	738	0
2019	8024	3314	0	8534	3457	0
2018	7736	2517	0	7311	2605	0
2017	6450	1793	0	6666	1965	0



Czechia

Year	Travelling to the country			Leav	ing the cour	ntry
	Learners	Staff	Others	Learners	Staff	Others
2023	23695	10842	140	26545	10597	275
2022	24049	9536	0	23123	8766	0
2021	12398	3979	0	11218	3399	0
2020	9363	1691	0	7131	1363	0
2019	20308	8024	0	18099	7675	0
2018	19229	6551	0	16430	6258	0
2017	17893	6035	0	15893	5240	0

Germany*

Year	Travelling to the country			Leav	ing the cour	ntry
	Learners	Staff	Others	Learners	Staff	Others
2023	83996	19602	673	112131	25947	518
2022	75309	16658	0	78411	19387	0
2021	39158	5305	0	45670	5203	0
2020	27284	3082	0	36085	4890	0
2019	67244	14919	0	80664	20773	0
2018	63636	13443	0	76125	17349	0
2017	64075	11921	0	72957	15197	0

^{*}The data for Germany refers to the whole country, not only the states Baden-Württemberg and Bayern.

Hungary

Year	Travelling to the country			Leav	ving the cour	ntry
	Learners	Staff	Others	Learners	Staff	Others
2023	17595	7203	310	22082	11611	238
2022	16642	6388	0	20227	9920	0
2021	12162	2853	0	8752	3935	0
2020	5808	756	0	4399	1148	0
2019	15309	4725	0	13949	7459	0
2018	14379	4080	0	12824	5699	0
2017	13461	3519	0	12154	4736	0

Moldova

Year	Travelling to the country	Leaving the country
	Learners & Staff	Learners & Staff
2023	197	468
2022	171	492



Montenegro

Year	Travelling to the country	Leaving the country
	Learners & Staff	Learners & Staff
2023	567	885
2022	512	787

Romania

Year	Travelling to the country			Leav	ing the cour	ntry
	Learners	Staff	Others	Learners	Staff	Others
2023	23027	9058	323	35340	17734	489
2022	33605	7136	0	44142	14653	0
2021	20690	4564	0	34378	8513	0
2020	6047	1217	0	10837	1965	0
2019	22156	7341	0	29334	10958	0
2018	17616	5621	0	24722	8480	0
2017	16341	4742	0	21675	7198	0

Serbia

Year	Travelling to the country			Leav	ing the cou	ntry
	Learners	Staff	Others	Learners	Staff	Others
2023	3793	1589	58	4007	1952	140
2022	1084	1462	0	5115	1064	0
2021	511	799	0	2397	327	0
2020	1164	319	0	819	1786	0
2019	1135	1283	0	2622	1772	0
2018	1598	1223	0	2221	1324	0
2017	3793	756	0	2161	1952	0

Slovakia

Year	Travelling to the country			Leav	ing the cou	ntry
	Learners	Staff	Others	Learners	Staff	Others
2023	9893	5372	146	16265	7033	155
2022	8165	4235	0	15792	5660	0
2021	4131	1873	0	7547	2537	0
2020	2253	820	0	3705	767	0
2019	7567	4155	0	11025	4944	0
2018	7411	3098	0	10915	3809	0
2017	6585	3105	0	9733	3160	0



Slovenia

Year	Travelling to the country			Leav	ing the cou	ntry
	Learners	Staff	Others	Learners	Staff	Others
2023	10608	4143	160	8744	4284	99
2022	10957	3631	0	10111	3872	0
2021	6341	2047	0	6147	1988	0
2020	3253	353	0	2579	647	0
2019	8602	3437	0	7439	3509	0
2018	7862	2133	0	7212	2522	0
2017	7202	1875	0	6121	1819	0

Ukraine

Year	Travelling to the country	Leaving the country
	Learners & Staff	Learners & Staff
2023	362	3563
2022	996	3 252