



With the support of the  
Erasmus+ Programme  
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# **Impact of the Erasmus+ CBHE projects on development and modernisation of higher education in the Republic of Uzbekistan**

## **INTERMEDIATE NATIONAL IMPACT STUDY**

### **REPORT PART I**

#### **DISCLAIMER**

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## **Introduction**

For the higher education system of Uzbekistan, 2017-2020 has become a period of radical transformations and important decisions aiming to improve the quality of higher education. It has greatly increased the relevance and importance of rapidly developing international cooperation. One of the important areas of this cooperation is the Erasmus+ programme, involving a total of 65 universities from all regions of the country. Erasmus+ programme is one of key directions of cooperation not just with the European universities, but also with universities in Central Asia, CIS member states and other regions of the world.

It is important to note that from the very beginning of the Erasmus+ programme in 2014, higher educational institutions (HEIs) of Uzbekistan have been actively participating in the programme, which has become a worthy continuation of the successful Tempus programme with an even wider range of opportunities for cooperation in the field of higher education. Due to this, the higher educational institutions of Uzbekistan could greatly enrich their experience of cooperation with universities in the European Union and in the neighbouring countries, develop a number of joint master's programmes, create joint departments and unique scientific laboratories, which had a significant impact on improving their international recognition and ranking.

The relevance of the Erasmus+ programme, its wide range of activities and opportunities for long-term cooperation are aligned with the goals outlined in the Concept for the Development of Higher Education of the Republic of Uzbekistan until 2030, as well as the recently adopted Law on Education and the Law on Science and support their implementation. The advanced teaching technologies introduced within the framework of joint projects, educational platforms established, and access provided to the educational resources of European universities greatly supported the transition of the entire education system to the online format in in the context of the pandemic in 2020 and the current year. Virtual mobility and combined mobility allowed for the personal development of teachers, participation in joint publications and continued joint research studies for the researchers at the universities in the country.

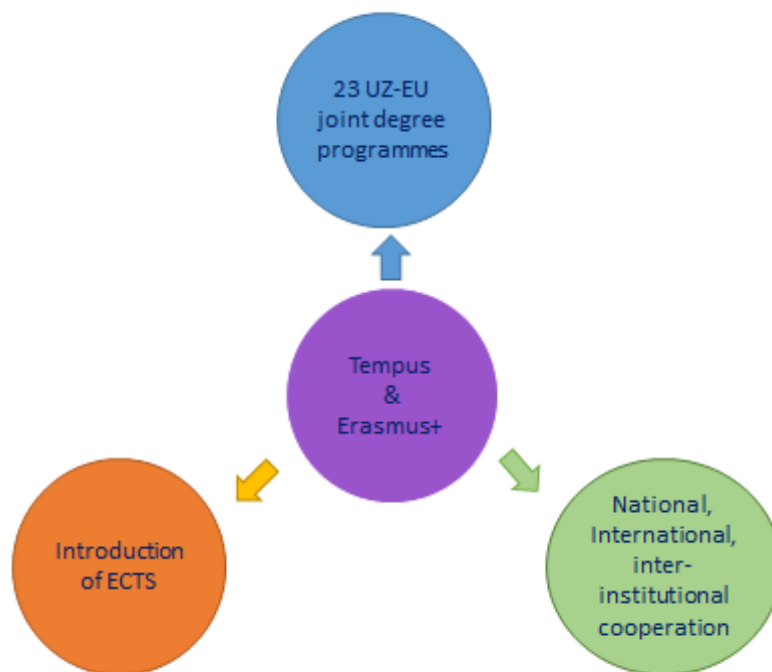
Given the strategic goals of the development of the national higher education system, it is necessary to use the capabilities of the Erasmus+ programme to improve the quality of training to produce highly qualified personnel able to think creatively and systemically, to enhance the investment attractiveness of the higher education system, and to support implementation of the University 3.0 concept which envisages a close connection between education, science, and innovation.

During 2020, activities continued to expand the enrollment of youth in higher education by dramatically increasing the number of new higher educational institutions (HEIs)

and opening branches of prestigious international universities in the country. The total number of HEIs has reached 129 by the end of 2020 year. For the period of 2017-2020 52 new HEIs have been established in the country, including 25 branches of foreign universities, and 9 non-state owned universities. Universities from many countries of the world are showing interest in opening their branches, not just in Tashkent, but also in the provinces. The number of defended theses and the publication-related activity of HEI professors and researchers have significantly increased.

Stable partnerships and linkages established under the programmes of the European Union are of great help in solving problems related to opening branches of recognised international universities, creating joint departments and programmes, and teaching subject matter in English. Obviously, the three-year collaboration under the Erasmus+ CBHE project and the exchange of students and faculty ensure mutual understanding, as well as the opportunity to compare and develop joint curricula, textbooks and teaching and learning materials. Erasmus+ projects and the overall experience of European countries in the implementation of European Credit Transfer and Accumulation System (ECTS) and a gradual transition to a credit and module based educational process (see Figure 1) have a particularly significant impact.

**Figure1. Impact of Tempus and Erasmus+ projects on modernisation of higher education in Uzbekistan**



In this regard, the projects also made a certain contribution to the development of the Resolution of the Cabinet of Ministers No 824 “On Measures to Improve the System of

Organization of the Educational Process in Higher Educational Institutions” dated December 31, 2020

According to the decree, the educational process in higher educational institutions should gradually transform into the credit and module based system starting from the 2020/2021 academic year. This act approves the Regulation on the introduction of the credit and module system into the educational processes of HEIs, based on the European Credit Transfer and Accumulation System (ECTS).

Given the continued growth in the number of higher educational institutions in the country, new Erasmus projects should also cover those for which this will be the first opportunity to establish long-term contacts and sustainable cooperation, not just with the European universities, but also with universities in Central Asia, CIS member states and other regions of the world.

The Ministry of Higher and Secondary Specialised Education (MHSSE) of the Republic of Uzbekistan supports the activities of the Erasmus+ programme and highly appreciates its significant impact, flexibility and timely and efficient response to all public decisions aimed at further improvement of the national higher education system.

In 2020, just like in all other countries of the world, the higher education system of Uzbekistan is going through serious challenges due to the COVID 19 pandemic. Despite the difficulties, our universities continue teaching, research, and international cooperation, through active use of advanced information and communication technologies. All areas of cooperation under the Erasmus+ programme and especially international credit mobility (ICM) projects faced serious challenges due to the Covid-19 pandemic. We must give credit to the coordinators and project participants from both the European and Uzbek sides, who found ways to maintain cooperation despite the challenges they faced, and also provided the necessary assistance to all mobility participants who were forced to extend their stay in another country as it was impossible to return home due to quarantine restrictions. All necessary changes, including the extension of the relevant visas and possible ways to continue studies and practice, were agreed in a timely manner between the partners.

Within the framework of the Erasmus + programme, in addition to financing joint projects for higher education institutions, support was provided for the National Teams of Experts in Higher Education (Higher Education Reform Experts-HEREs).

The National Teams operating since February 2008 in all partner countries help strengthening cooperation on general issues related to the higher education reform, including quality assurance, innovation and meeting the labour market needs.

The main task of the National Team of Experts in the Field of Higher Education is to disseminate information about the development of the national higher education system

as well as about transformation in the common European Higher Education Area covering 49 countries participating in the Bologna process.

Activities of the National Teams in partner countries which are not involved in the Bologna process are aimed at promoting the modernization of higher education in accordance with the national strategies and reform policies in this area.

The impact of all project teams, as well as the National Expert Team, on the modernization of higher education at their institutions and at the national level is widely recognized.

A particular progress is observed with regards to the introduction of the ECTS (European Credit Transfer and Accumulation System) in HEIs, which will increase the efficiency of the teaching and learning process and international integration. The traditional training workshops, teleconferences, consultations and meetings held in recent years by the MHSSE jointly with the Erasmus+ National Office and a team of experts were very important and have had a certain impact on the development of the higher education development strategy.

The collection of scientific and methodological publications by the team of higher education experts entitled "Prospects for the Development of Higher Education", that was launched in 2011 under the Tempus programme, in 2020 acquired a new status of an official scientific and methodological journal as it had been successfully registered under the framework of the Erasmus+ programme. The eighth issue of the collection was presented at the team's annual closing seminar held online on December 15, 2020, and then published on the website [www.erasmusplus.uz](http://www.erasmusplus.uz) to be accessed by the general public. The MHSSE of the Republic of Uzbekistan is ready to support this publication in every way possible, as the purpose of the publication is to familiarize HEI staff members and students with the latest developments and best practice in higher education, both international and local ones.

One of the many tasks of the team is the implementation of the so-called Technical Assistance Mission (TAM), aimed at holding targeted seminars with the participation of European professors on topics previously proposed and agreed upon with the MHSSE. During 2017-2020, 14 TAM seminars have been held on the credit and module system, methods of teaching English for non-linguistic specialisations, doctoral studies, quality of education, learning outcomes, qualifications frameworks, and employment of graduates.

Members of the National Team of the Republic of Uzbekistan actively participated in the discussion and review of issues related to quality assurance, development and implementation of ECTS, internationalization and autonomy of universities. Moreover, many experts worked directly in the State Inspectorate for Supervision of Quality in Education (SISQE) or MHSSE, and worked as heads of HEIs and members of state committees.

The experts held the 4<sup>th</sup> National Scientific and Practical Conference on "Erasmus+ credit mobility: role in improving the quality of higher education" in the online format, which has become an annual event for the team, on December 16, 2020. The goal of the conference was to increase efficiency of the educational process and research of Uzbek specialists through the exchange of knowledge, experience gained during the mobility periods and the implementation of outcomes and research findings. The conference serves as a response to the recommendation of the MHSSE to disseminate the results of cooperation under Erasmus+ projects in order to promote best practices and attract new teams and participants throughout the country. The proceedings of the conference reflect the current situation during this difficult year and clearly show the commitment to continued cooperation and mutually beneficial academic exchange of students and teachers. The circle of authors keeps expanding and includes European partners as well.

### **Summary**

The Tempus and Erasmus+ programme, according to a study based on online survey, in-depth expert interviews and focus groups discussions conducted in November through December 2020, as well as on the analysis of field monitoring visits and institutional monitoring by the National Erasmus+ Office (NEO) is the only one and the largest cooperation programme with the European universities that has had a systemic impact on the development and modernization of higher education in the Republic of Uzbekistan. This conclusion was also reflected in the report of the on-line regional cluster meeting on the study of the impact of Erasmus+ CBHE projects held on November 19-20, 2020. The significant impact of the programme on the implementation of higher education reforms and timely response to government decisions to modernize the system is confirmed in the Regional report on Central Asia<sup>3</sup> prepared by EACEA based on the analysis of the final reports of the first generation of 2015 CBHE projects. Moreover, Tempus and Erasmus+ programmes were highly appreciated both by the Ministry of Higher and Secondary Specialised Education of the Republic of Uzbekistan and by other sectoral ministries and departments such as the Ministry of Health, Ministry of Agriculture, Ministry of Foreign Affairs, Ministry of Innovation Development and others.

However, during the period covered by the study, a number of challenges and difficulties were identified that were faced by the project teams when implementing Erasmus+ projects. Difficulties and challenges were of both systemic and ad hoc nature, as the study participants noted in their presentations and questionnaires they filled.

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<sup>3</sup> Regional report on Central Asia prepared by EACEA <https://op.europa.eu/en/publication-detail/-/publication/39eb35f5-40e0-11eb-b27b-01aa75ed71a1/language-en>



All experts and respondents who participated in the study noted that without the impact of the Tempus and Erasmus+ projects it would hardly had been possible to achieve such a rapid modernization of higher education in Uzbekistan in 2017-2020, especially with regards to the new and often innovative areas of education.

**In general, opinion leaders have a unanimous “red line” with regards to the implementation of the Tempus and Erasmus+ projects. This line leads clearly from the impact of projects on the reform and modernization of the higher education system and capacity building within the Tempus programme since 1994. As from 2015 it further continues through introducing and disseminating the results of these changes in the higher education system thanks to the Erasmus+ programme. And then it comes to the point where the impact of projects is expected to increase the innovation rates and competitiveness of the national higher education system with the assistance of the future Erasmus+ programme for 2021-2027.**

Moreover, the drastic increase in the number of HEIs in Uzbekistan in 2017-2020, including branches of international universities, and the emergence of a large number of non-state, private universities, also happened due to the trained personnel who took part in Tempus and Erasmus+ projects. However, experts also noted a certain cautiousness of European partners with regards to creating joint universities or branches in Uzbekistan, in contrast to partners from South Korea and the Russian Federation. But in general, the European colleagues are interested in establishment of joint master degree programmes and departments, and this interest even has a tendency to grow.

In the course of the National Impact Study (NIS) of Tempus and Erasmus+ programmes, many of the study participants gave a large number of comments and recommendations on preventing difficulties and challenges of participation in the programme, but all the problems observed were mitigated by the results and the impact of the programme on their individual professional development, building the capacity of departments and universities, as well as providing systemic impact at the regional and national levels.

Also, HEREs prepared 6 analytical notes, and their findings will be presented in the second part of the present report. The following relevant topics were discussed to support making decisions on future national and regional priorities, as well as describing development trends in the Republic of Uzbekistan until 2030: the focus was on the following reforms implemented in Uzbekistan in the period from 2017 to 2020: structural reforms in the public governance and economics; in higher education; in the field of science and innovation; in agriculture and health care.

In the context of each analytical note, brief descriptions of CBHE Erasmus+ projects were presented, with links to the official project websites, as well as the main project outcomes.

The authors of the study also noted certain aspects of the implementation of Erasmus+ projects in Uzbekistan during the COVID-19 pandemic. An online survey was conducted and a number of relevant questions regarding this issue were also asked during expert interviews and focus groups discussions. The general conclusion of this study was that the quarantine measures taken by the states had a serious impact on Erasmus+ projects, especially on the tasks and activities related to mobility. Nevertheless, cooperation and implementation of projects continued, and only in isolated cases the activities of the projects were completely stopped. It was especially important to learn that the comprehensive support of all stakeholders within the Erasmus+ programme, including European partners, MHSSE and the NEO, was felt and highly appreciated by the respondents.

The format of this study does not allow for including the full range spectrum of the results of the analysis. However, the most outstanding points - challenges and recommendations - were included.

## **1. Goals and objectives of the Impact Study**

The National impact study of CBHE projects on the development of regions, countries, organizations, and individual higher education professionals, including students was initiated by EACEA in 2020.

The National Erasmus+ Offices are the implementing bodies of the impact studies of CBHE projects and partially ICM projects jointly with members of the National Teams of Higher Education Reform Experts of the respective countries where the NEOs operate. The National Erasmus+ Office in Uzbekistan and the National Team of HEREs designed this study.

Goal of the study: arrange and conduct an interim impact assessment of the Erasmus+ CBHE and ICM projects in the Republic of Uzbekistan at the national, institutional and individual levels. In this study, impact is defined as follows: Capacity-building projects are expected to have a long-term structural impact on the systems, organisations/institutions and individuals in Uzbekistan.

Study objectives: 1. To assess the impact of CBHE and ICM projects for 2015-2017 by analyzing monitoring reports and self-reports on the ground; 2. Evaluate the sustainability of the results achieved over the study period, through an independent online survey of project participants; 3. To identify the indirect and long-term impact of projects on the development of project participants, organisations and the region through focus group discussions; 4. To highlight the main problems, challenges and

recommendations to be considered for the next period of 2021-2027, taking into account the forecast of development trends in the Republic of Uzbekistan.

Period covered by the impact study: November-December 2020.

### **1.1 Methodology**

The research methodology is based on the methods of sociological analysis of documents and surveying of target audience. The documents used for research included field monitoring reports, self-reports of project teams from Uzbek HEIs. In order to strengthen the evidence of the study, surveys were held through online questionnaires, as well as focus groups discussions and structured in-depth interviews with experts.

### **1.2. Desk Research**

A desk study or document analysis method is a systematic study of existing documents on monitoring CBHE and ICM projects at the NEO in Uzbekistan, in order to obtain information relevant for the research. For the purpose of this study, a document is a material or virtual (computer file) object (monitoring report) specially created by the monitoring expert and project manager of NEO Erasmus+ in Uzbekistan, intended for documenting, transferring and storing information within the framework of their activities.

The authors of the study took into account the fact that these documents at the same time contained two types of information: 1) information about facts, events, results of activities on the implementation of the CBHE and ICM projects; 2) the author's position (report on the self-assessment of the project by HEIs), the assessment of these facts, presented in the content of the document, as well as in its structure, style, and means of expression.

The main purpose of the method is to extract the information about the impact of the CBHE and ICM project and its sustainability after completion, contained in the document, document it in the form of characteristics (analysis categories), determine its reliability, accuracy, importance for research purposes, to develop objective and subjective estimated characteristics and indicators of the process being studied. These tasks which are addressed during the document analysis also give an idea of the stages of its application.

In this regard, the authors of the impact study in the course of the work separated facts from assessments in the document; besides, they checked the reliability of the sources and accuracy of information through additional research methods.

As part of desk analysis, the authors also used the results of the Erasmus+ Regional Cluster Meeting held in Central Asia on November 19-20, 2020. Special attention was paid to the results and conclusions of the working group discussions, as well as the analysis of the discussions at the plenary sessions.

### **1.3. Online survey of project coordinators and participants**

Online survey method was used to conduct an online survey of project coordinators and participants, including the administrative staff and students. The links to the online survey were disseminated through the HEIs' departments of international relations, as well as through project coordinators.

The online questionnaire was focused on assessing the impact of the project, which involved HEI representatives and other stakeholders. The authors of the study, in addition to assessing the impact of the project, were interested in the sustainability of the outcomes, as well as the overall assessment of the Erasmus+ programme.

The authors of the study planned to collect answers from at least 100 respondents who had participated or were participating at the time of the study in the projects of the Erasmus+ programme from December 05-11, 2020. The questionnaire consisted of 3 blocks and 40 questions. In total, 118 people responded during the indicated period, which provided a sound basis for the analysis.

### **1.4. Holding a structured survey in focus group format**

The focus group method for collecting qualitative information was chosen to verify the results of statistical analysis of information received from the online survey. In addition, a structured group discussion allowed to assess in greater detail the achievements of the project in terms of its long-term impact and achieving the planned goals, and, importantly, the challenges and difficulties that were most often encountered during the implementation of the project.

All members of these focus groups had similar social and demographic characteristics, attitudes or behaviour patterns. The following four groups were selected for the discussion: 1. Representatives of CBHE structural projects; 2. Representatives of Engineering and ICT projects; 3. Representatives of healthcare projects; 4. Students who participated in the ICM and CBHE projects.

### **1.5. Structured in-depth interviews**

In order to strengthen the substantiation of the impact study, structured in-depth interviews (so-called expert surveys) with experts and stakeholders were conducted. In this study, two types of experts acted as respondents – 1) representatives of stakeholders and focal points from the ministries and agencies of the Republic of Uzbekistan involved in or influencing the implementation of CBHE projects; and 2) national coordinators of CBHE projects with many years of experience and a certain number and proven quality of implemented Tempus and Erasmus+ CBHE projects.

To assess the degree of significance of an expert for this study, a “significance questionnaire” was developed, which allowed to rank expert opinions and, accordingly, improve the substantiation of the study.

The main purpose of the expert survey method is to identify the most significant aspects of the researched issue, namely the impact of Erasmus+ CBHE projects at three levels, with a focus on the national and regional level, as well as to increase the reliability, accuracy and validity of information through the use of expert knowledge and experience.

A quantitative analysis of the implementation of the Tempus and Erasmus+ CBHE projects in the universities of the Republic of Uzbekistan was carried out to select experts. It helped identify the leaders and the universities with whom and where interviews were conducted from December 7-11, 2020.

To select the most authoritative opinion leaders, a subjective and objective assessment of the “expert weight” denominated in points from 0 to 3.8 was carried out. Moreover, for the study, the minimum entry threshold for the expert pool was 3.0 points. For completeness of the expert question, it was planned to have 10 participants with scores of at least 3.0, and the average score for the entire group of experts was 3.5 points. The group of experts included representatives of various ministries and agencies, as well as rectors, deputy rectors, professors, and PhD students.

## **2. Impact and sustainability of CBHE projects in Uzbekistan**

### **2.1. Short description of achievements and sustainability of Tempus projects in Uzbekistan**

The Tempus programme began its activities in Uzbekistan in 1994, and more than 80 inter-university cooperation projects had been funded over 20 years with a total amount of over €34 million. In total, over 55 Uzbek HEIs and over 150 universities from 22 countries of the European Union and 10 partner countries took part in these projects (see Fig. 2). In this regard, the Tempus programme has had a significant impact on the overall process of internationalisation of higher education in Uzbekistan, as it was the only programme that provided the basis for intensive cooperation with the universities of European Union and partner countries.

The Tempus programme has been a powerful and efficient tool to support educational reforms in the country, especially since 1997, when the new Education Law and the National Programme for Personnel Training (NPPT) were adopted. The programme has become even more relevant in the recent years, as Tempus projects contributed to the implementation of government decisions on the modernization of the higher education system in Uzbekistan adopted in 2011-2012.

**Figure 2. Tempus project statistics for 1994-2013**

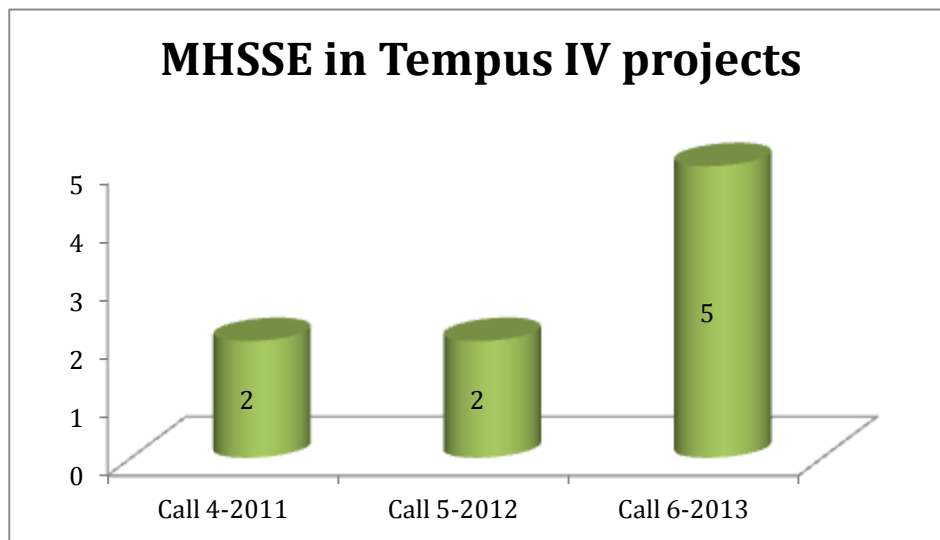
### Tempus in Uzbekistan (1994-2013)

- 80 projects
- 55 local HEIs
- 44 local non-academic organisations
- Over 150 universities from 22 EU MS and 10 partner countries

Curriculum development projects were particularly important due to the direct connection with the implementation of the National Programme for Personnel Training and the introduction of a two-tier higher education system. Over the years, many Tempus projects have focused on curriculum development with the introduction of new specialties, mainly at the master's level, in engineering, applied sciences, teacher training, social sciences, management and business. Moreover, since 2011 representatives of the MHSSE of the Republic of Uzbekistan have actively participated in Tempus projects (Diagram No 1) and acted as full-fledged partners in the implementation of nine Tempus projects.

The new programmes were aligned with the needs of the local labour market through the direct participation of local enterprises operating in the energy, aviation, automotive, food, textile and chemical sectors, as well as various line ministries, the Chamber of Commerce and other non-academic organizations representing key sectors of the national economy.

**Diagram 1. Involvement of the MHSSE in Tempus IV Projects**



Several ministries, enterprises and various public and private entities and organizations have expressed interest in employing graduates trained under Tempus projects, and this led to increased demand for students who have completed training in new master programmes on food safety, water and land management, ICT, etc. increased. The numerous training laboratories created under the Tempus projects also contributed to the improvement of professional skills of specialists from enterprises that were part of project partners consortia in Uzbekistan.

The Ministry of Higher and Secondary Specialised Education noted the significant impact of the Tempus programme at the national level due to the long-term activity (since 1994) and wide participation of a large number of HEIs (over 55 HEIs from all regions of the country) out of total of 64 HEIs operating at that time, which means that coverage of the Tempus programme in Uzbekistan was about 86%

Tempus projects have been of great benefit to HEIs from various regions of the country, as due to them HEIs strengthened interaction with other domestic HEIs throughout the country, in addition to establishing long-term partnerships with many European universities.

The programme assisted in the development of quality assurance systems, introduction of Bologna Process principles and procedures into the curricula and their use for the development of new initiatives and improvement of HEI governance.

Thanks to the active engagement of the Uzbek partners who improved their project management skills, spin-off effects which were not envisaged by the initial plans were achieved under many of the projects. For example, due to the re-training courses for management staff of HEIs, a new master degree programme in educational management was introduced at the Tashkent State Pedagogical University, as well as respective optional courses at all departments.

Four Tempus projects, namely EU-TraCeFer, UnIvEnt, PROMENG and ITEDU, have contributed to the strengthening of links between different levels of education, in particular, between higher and secondary specialised vocational education. As a result of the implementation of one of them (EU-TraCeFer, project for establishment of European-Uzbek Training Center for Vocational Education Teachers in Ferghana), training centres in Tashkent and Fergana started offering re-training courses for teachers of professional colleges and academic lyceums, providing them with certificates recognised by the MHSSE.

As a programme supporting equal and mutually beneficial cooperation, Tempus has been a vehicle for building strong international partnerships. It is important to note that after closing of the funding partnerships between HEIs from Uzbekistan and the EU were maintained through academic exchanges, joint publications and joint research or other academic projects.

Eleven projects were funded under the last 6<sup>th</sup> Tempus IV Call in 2014, due to the European Commission's decision to provide additional funding for Uzbekistan in the amount of €5 million, taking into account programme effectiveness in the country. Higher education institutions of Uzbekistan were also active participants of Erasmus Mundus, the programme complementary to Tempus which was aimed at supporting the academic mobility of students and professors, as well as strengthening interuniversity cooperation. In 2013, opportunities for learning mobility were expanded within thanks to bilateral allocation of €3 million to Uzbekistan on the top of regional budget for Central Asia.

Tempus programme in Uzbekistan provided much needed expertise in support of the three-cycle system, which replaced the previous two-stage postgraduate education system. Tempus projects and their participants provided certain support to making this decision, which demonstrated a move towards the Bologna Process. In addition, two workshops on EU experience in developing doctoral programmes were held in Tashkent in August 2013.

Tempus projects have contributed to strengthening of cooperation not just between Central Asian countries, but also between Uzbekistan and CIS partner countries. Since 2008, Uzbekistan has been involved in more projects with the participation of several countries: for example, 20 out of 30 projects under Tempus IV programme are multi-country with the participation of 46 Uzbek higher educational institutions and more than 150 universities from 10 partner countries and 22 EU member states.

Moreover, the experience that Uzbek HEIs obtained under Tempus projects became a success factor for the start of the Erasmus+ programme in the country and served as a foundation for the launch of ICM projects and bilateral cooperation with EU universities.

In November 2019, in honour of the 25<sup>th</sup> anniversary of Uzbekistan and EU cooperation in higher education, the National Erasmus+ Office in Uzbekistan presented a poster with information on achievements of the Tempus and Erasmus+ programmes and their impact on the development of higher education system. The poster shows all activity areas in the past and in the present, as well as further prospects in a view of the implementation of the Concept for the Development of Higher Education until 2030, using infographics. A banner with a link to the poster was posted on the website of the MHSSE.

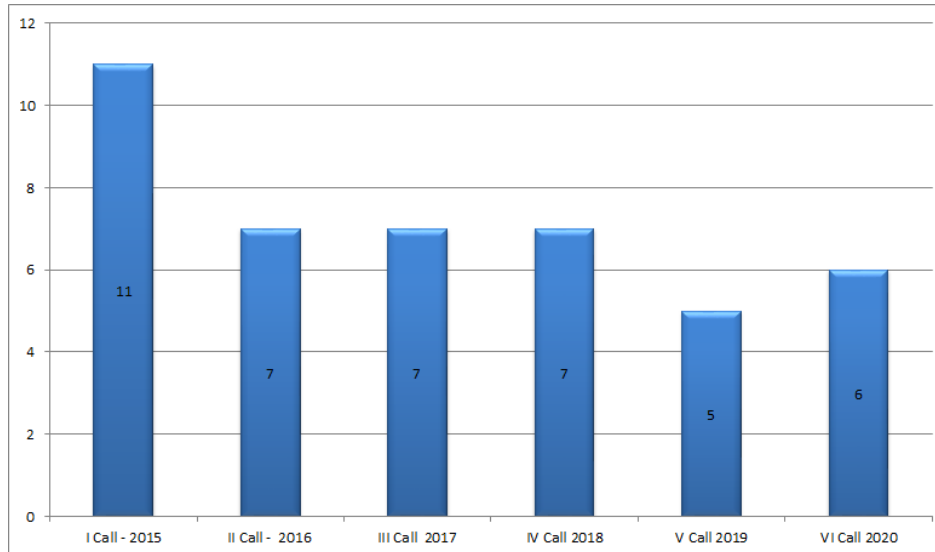
## **2.2. Quantitative analysis of CBHE projects in Uzbekistan**

As of December 2020, a total of 37 projects with the participation of Uzbek universities were financed, including 18 completed projects (11 projects of the 1<sup>st</sup> Call-2015 and 7 projects of the 2<sup>nd</sup> Call-2016) and 19 ongoing projects (7 projects of the 3<sup>rd</sup> Call-2017, 7



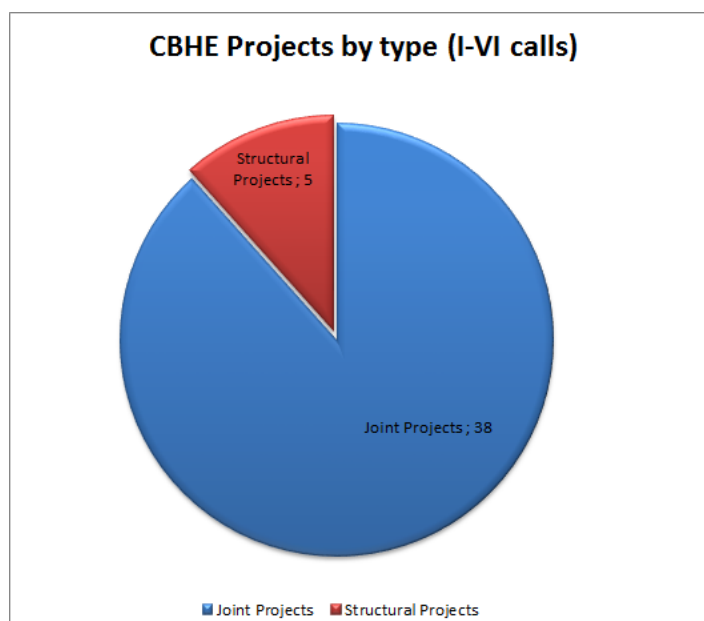
projects of the 4<sup>th</sup> Call-2018 and 5 projects of the 5<sup>th</sup> Call-2019). In January 2021, implementation of 6 new projects of the 6<sup>th</sup> Call-2020 will begin (see Diagram 2), so that the total number of projects will amount to 43.

**Diagram 2. Number of projects funded for Uzbekistan 2015-2020**



The largest number of projects with the participation of Uzbek HEIs was selected for funding in 2015. This is due to the fact within the 2015 Call due to the transition period between Tempus and Erasmus+ programmes some budget reallocation between regions had occurred.

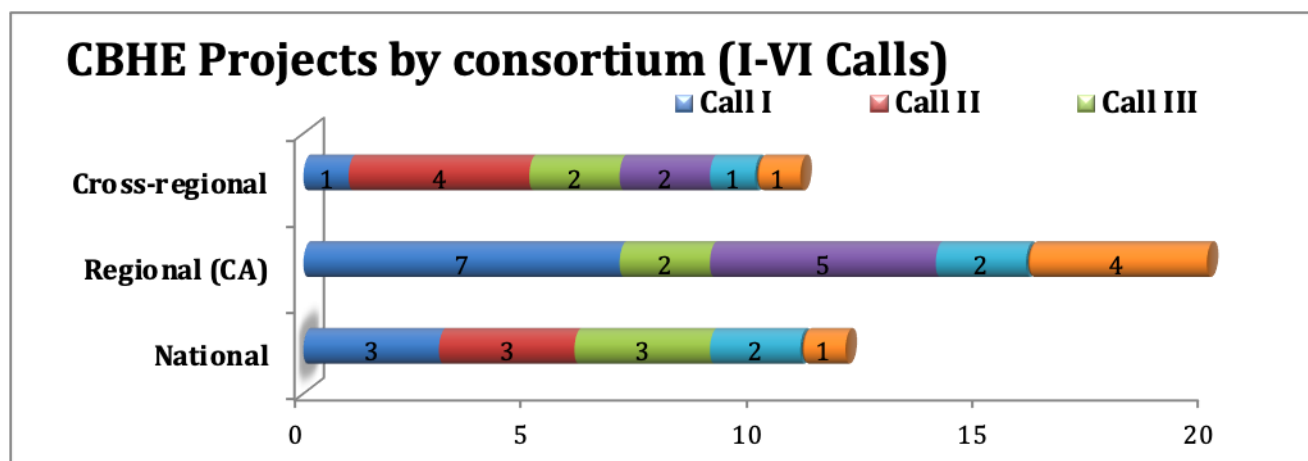
**Diagram 3. Erasmus+ CBHE projects broken down by types (I-VI Calls)**



Out of the 43 projects funded, the majority are Joint projects, and only 5 are Structural projects. Nevertheless, the MHSSE of the Republic of Uzbekistan is involved in 13 of them, which indicates a great commitment and wide involvement of employees of various departments of the MHSSE in project activities. Moreover, the State Inspectorate for Supervision of the Quality of Education under the Cabinet of Ministers of the Republic of Uzbekistan is involved in one of the projects as a partner.

Interesting data was obtained from the analysis of the Erasmus+ projects consortium of all 6 Calls. Thus, there were 12 national projects, involving European and Uzbek universities, 11 cross-regional projects, and 20 regional projects with the participation of HEIs both from Uzbekistan and a number of other Central Asian countries (Diagram 4).

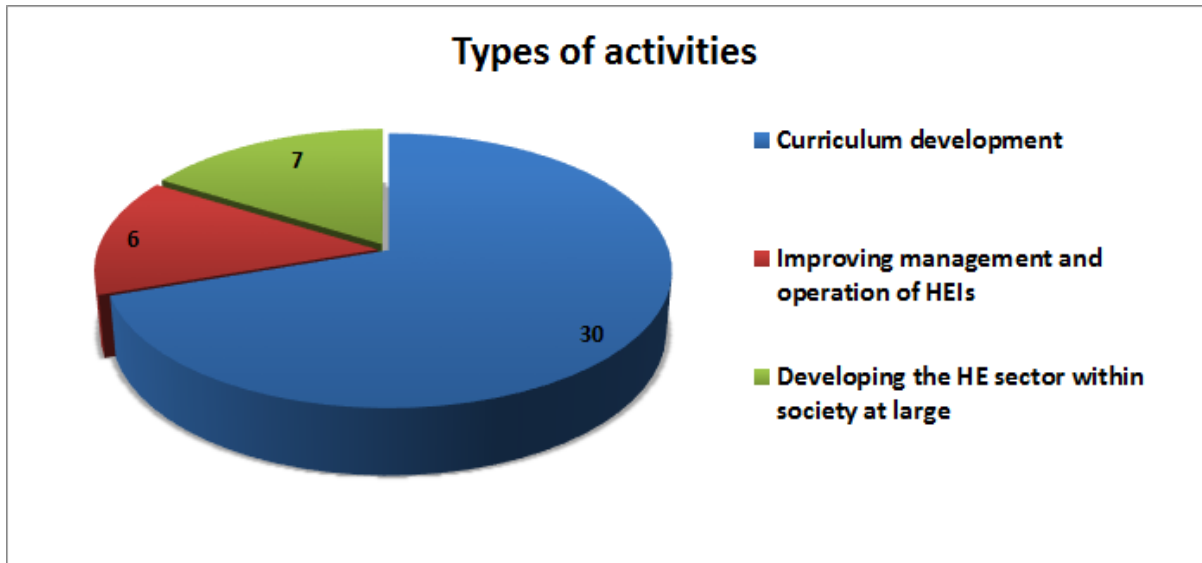
**Diagram 4. Erasmus+ CBHE projects broken down by consortia composition in Uzbekistan (I-VI calls)**



As we can see from Diagram 4, there are roughly equal numbers of national and cross-regional projects, whereas regional projects outnumber the former two types by almost two times.

The data on the types of activities of the projects are very indicative. They are divided into the following types: 1) curricula development; 2) improving the governance, management and operation of HEIs; 3) strengthening the links between HEIs and the economic and social environment.

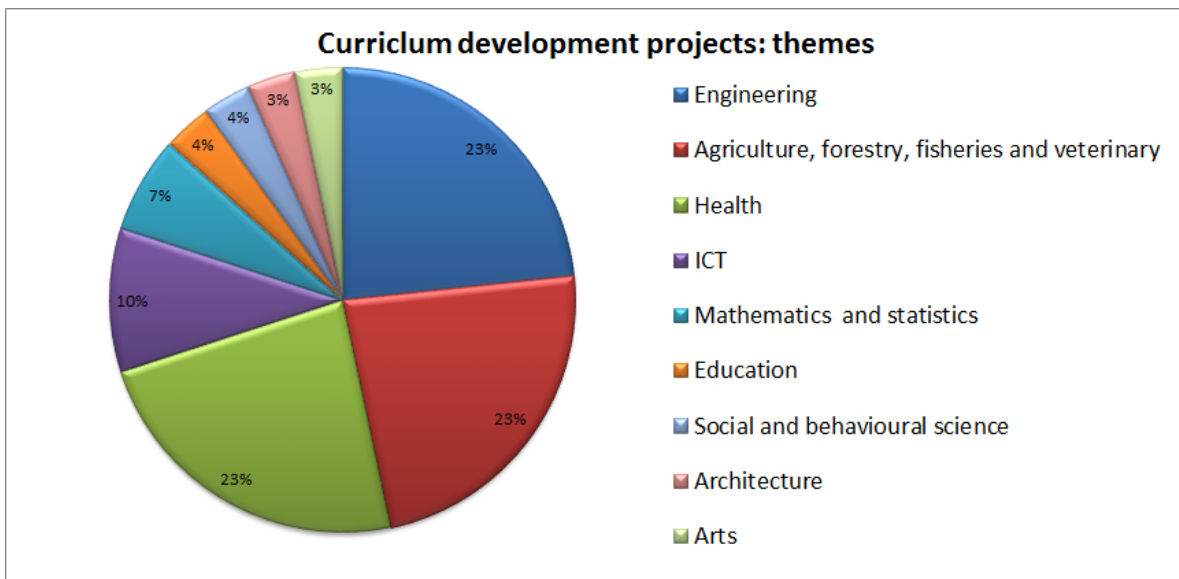
**Diagram 5. Types of project activities**



According to Diagram 5, Curriculum Development was the absolute leader as it was selected for funding 30 times, and the other two types of projects, according to the types of activities, constituted a significantly smaller number of projects. Seven projects were on strengthening the links of universities with the economic and social environment, and six projects on improving governance, management and operation of higher education institutions.

The 30 curriculum development projects have diverse topics. This wide variety is shown on Diagram 6: other themes are represented more modestly.

**Diagram 6. Curriculum development projects: themes**



As Diagram 6 shows, three topics were equally represented, while the rest of the topics had a smaller representation. This distribution generally corresponds with the current development needs of Uzbek economy. These are engineering, agriculture, forestry, fisheries and veterinary medicine, as well as healthcare: 23% percent of projects in each of these areas.

**Diagram 7. CBHE projects on HEI governance, management and operation, development of links between universities, economy and society at large (HES)**

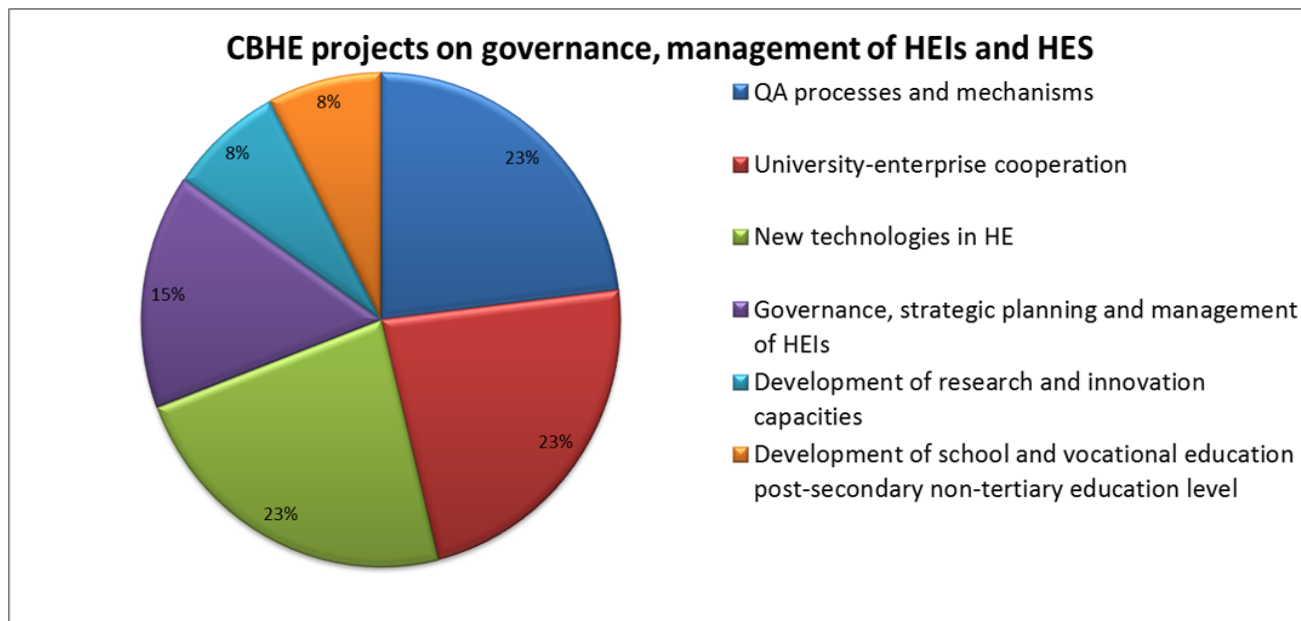


Diagram 7 shows the areas covered by CBHE projects on HEI governance, management and operation, development of links between universities, economy and society at large (HES) that constituted less than one third of the total number of CBHE projects (13 out of 43 projects financed). Nevertheless, majority of these projects made a systemic impact, and their results were institutionalised and integrated. The projects on quality assurance processes and mechanisms (IMEP, IQAT, PAWER), on university-enterprise cooperation (CACTLE, TRIGGER, REILEAP) and the projects on new technologies in higher education (MIND, NURSLIN, HIEDTEC) are equally distributed as evident from the diagram.

Diagram 8 shows the total project budget allocated for 43 Erasmus + CBHE projects from all six Calls. As can be seen from the Diagram, about €11.5 million were allocated for HEIs in Uzbekistan out of €36.6 million of total projects' budget.

**Diagram 8. Total budget of 43 projects with involvement of Uzbekistan (€36.6 million), including allocation for Uzbekistan HEIs (€11.5 million) for 2015-2020**

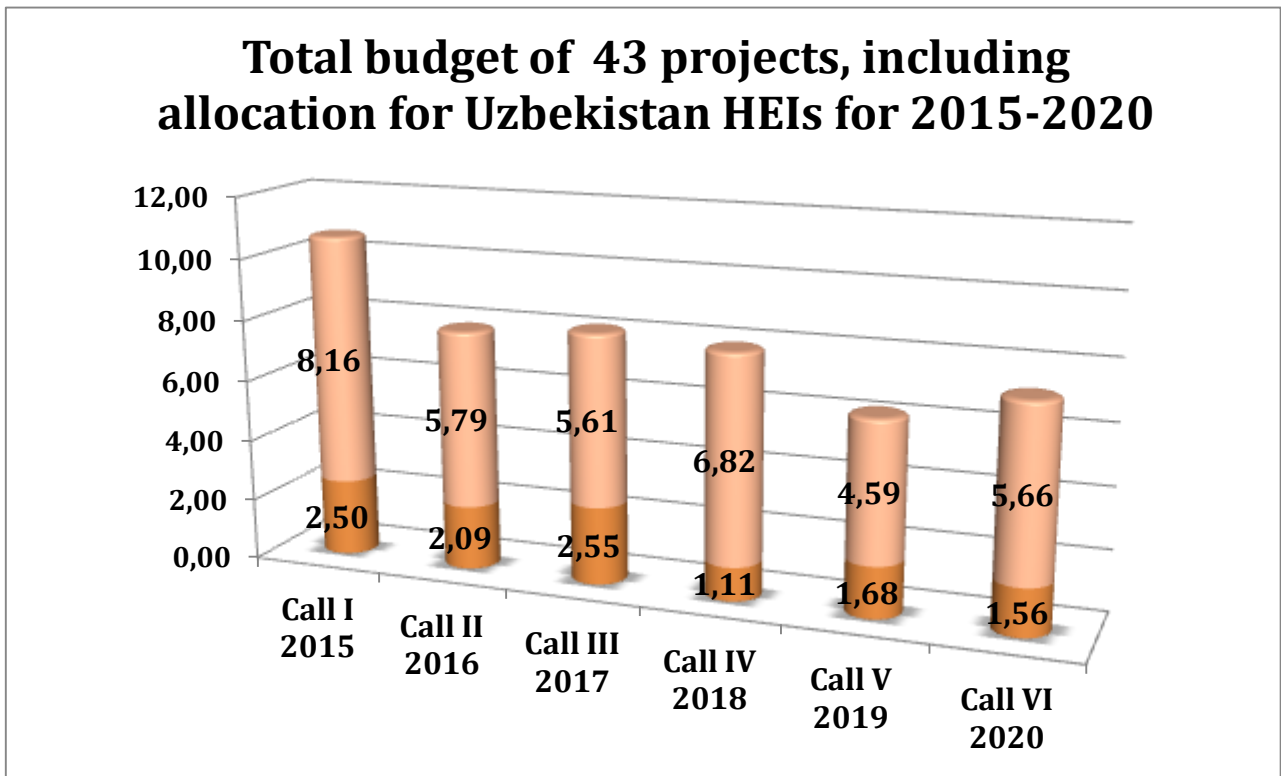
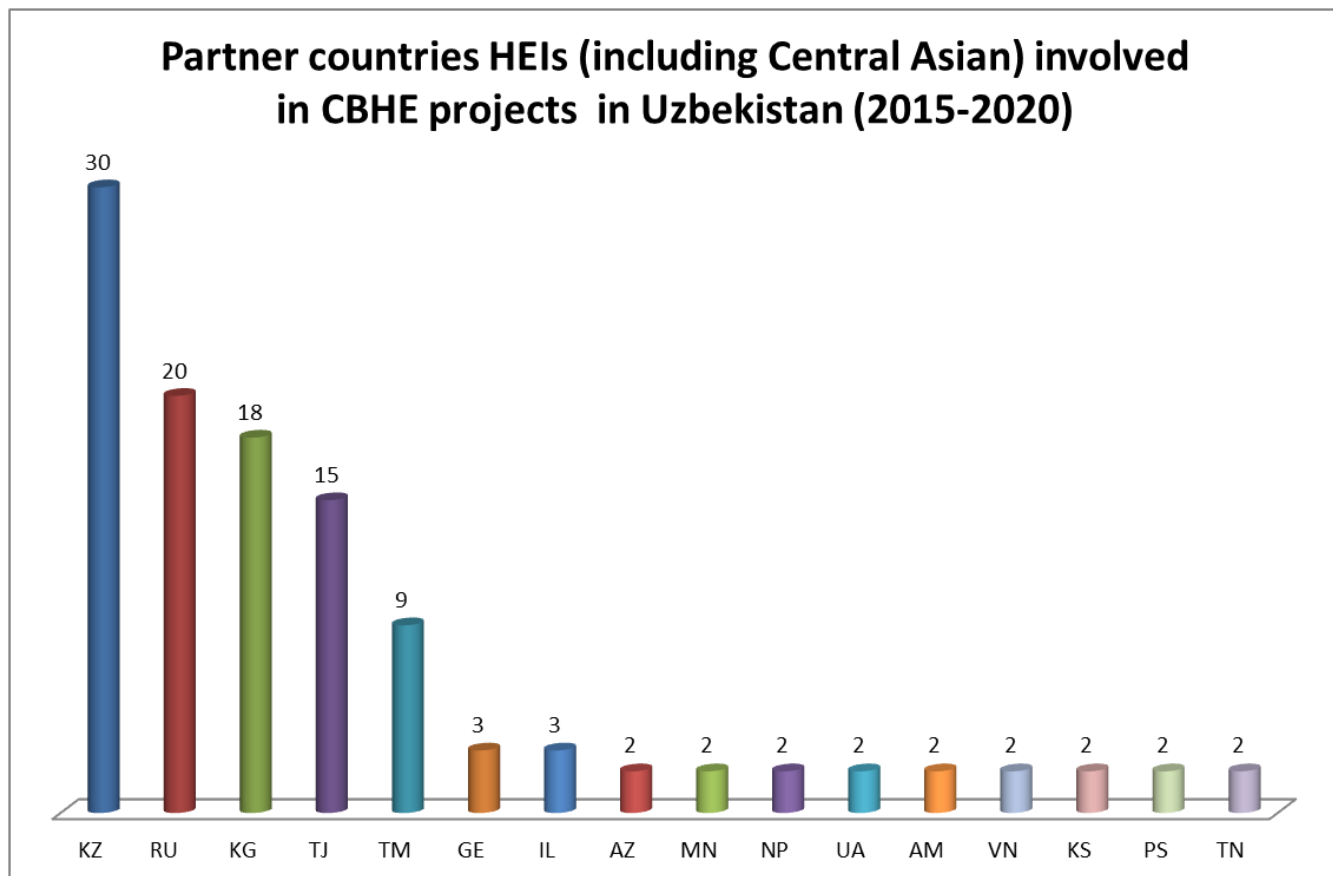


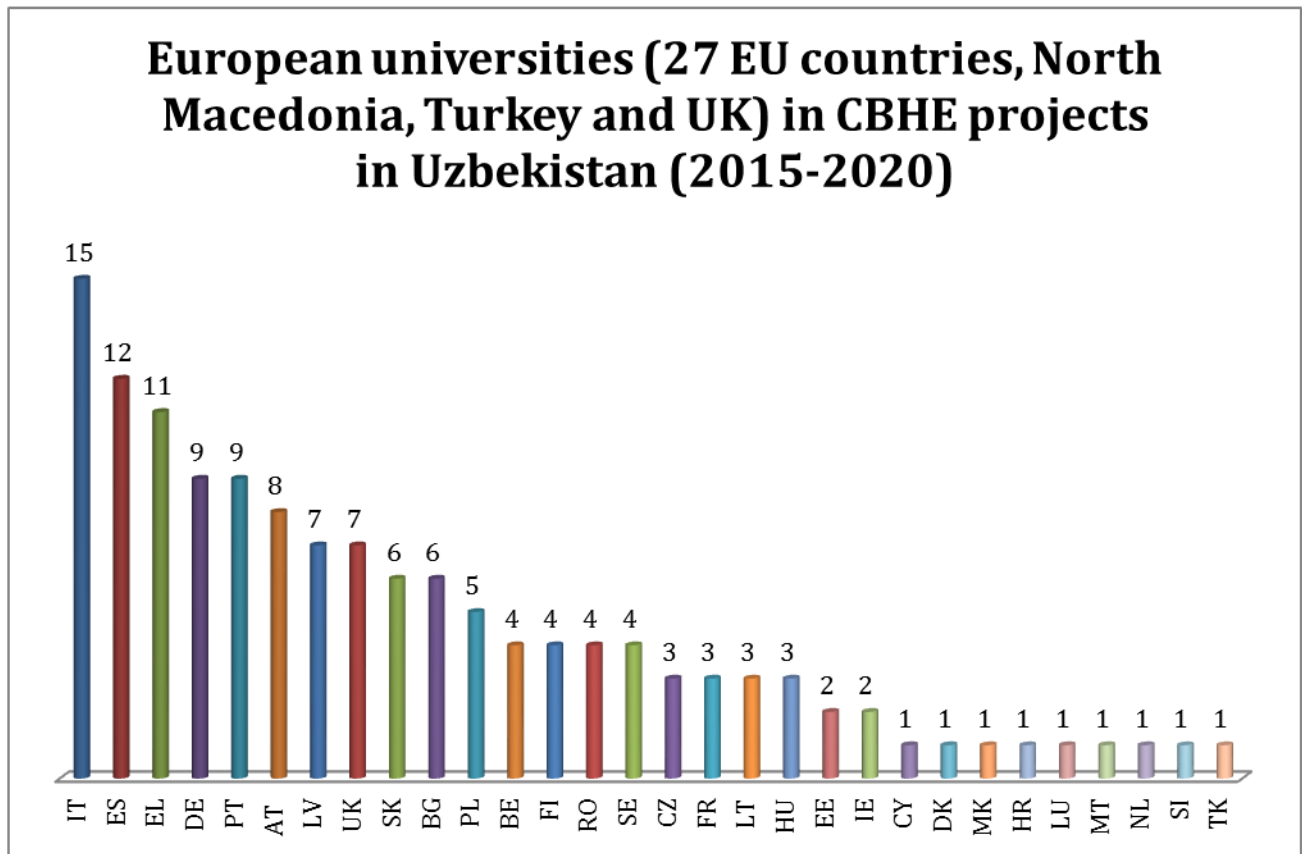
Diagram 9 shows the statistics of the partnership with universities of different regions of the world in Erasmus+ projects for the entire duration of the programme. As can be seen from the diagram, the leaders are the countries neighbouring with the Republic of Uzbekistan, as well as HEIs of the Russian Federation.

**Diagram 9. Partner country HEIs (including Central Asia) in CBHE projects in Uzbekistan (2015-2020)**



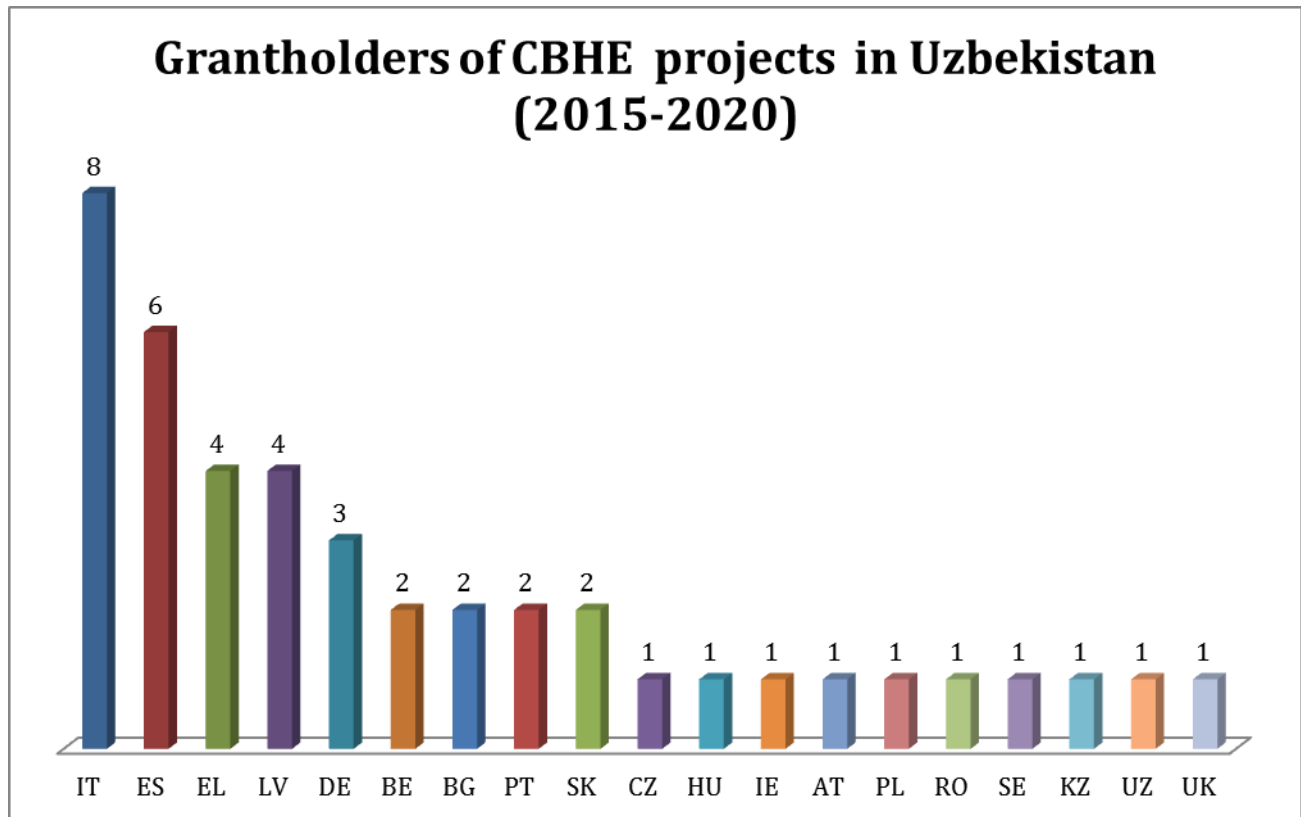
The largest numbers of partner HEIs from programme countries are the universities of Italy, Spain and Greece (see Diagram 10).

**Diagram 10. European universities (27 EU member states, North Macedonia, Turkey and UK) in CBHE projects in Uzbekistan (2015-2020)**



The statistics of the leading HEIs acting as grantholders/coordinators of CBHE projects with the participation of Uzbek HEIs, in general, correlates with the distribution of partner countries. Diagram 11 shows that the largest number of coordinator universities was from Italy and Spain. Kazakhstan and Uzbekistan are represented as coordinators as well.

**Diagram 11. University coordinators of CBHE Projects in Uzbekistan (2015-2020)**





## Visual identities of 19 on-going Erasmus+ CBHE projects in Uzbekistan<sup>4</sup>



<sup>4</sup> As a year-end 2020



**IHOD** Improving Healthcare Outcomes in Chronic Disease –  
Enhancing the Curriculum at Masters level



**TALENT** Co-funded by the  
Erasmus+ Programme  
of the European Union   
Establishing HRM Master Programmes in Central Asia

**Visual identities of 18 completed Erasmus+ CBHE projects in Uzbekistan<sup>5</sup>**



<sup>5</sup> As a year-end 2020



### 2.3. Results of Impact Monitoring Analysis of CBHE projects in Uzbekistan

Since 2015 more than 50 field monitoring visits have been carried out by the NEO Uzbekistan team. The Tempus projects created pavement for the Erasmus+ projects' generation. Majority of Erasmus+ CBHE projects were developed as a follow-up of Tempus projects directly and indirectly. Management of projects at the local level is well evolving. There are already more than 15 teams at different HEIs with significant potential in management of EU funded projects obtained while implementing several Tempus, Erasmus Mundus External Cooperation Window, Erasmus+ projects. Some consortium kept their core member universities and research topics for more than 14

years (Tempus LAREMA 2004-2009, GE-UZ 2012-2015, Erasmus+ DSinGIS 2017-2020). For instance, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers under coordination of Obuda University, Hungary team together with the other EU and local partners have consecutively implemented two Tempus and one Erasmus+ CBHE projects contributed to development of new Master and Doctoral programmes in Geoinformation systems and related fields. It should be noted that higher education institutions from all 12 country regions and Karakalpakstan are involved in Erasmus+ CBHE projects, clearly understanding the main programme objectives and features. There are experienced local teams at regional universities, which are leading with a number of Erasmus+ CBHE projects.

Starting from 2017 a number of positive changes facilitating implementation of Erasmus projects were introduced in the country. During the monitoring it was found out that newly developed Master programmes within Erasmus+ CBHE projects are continuously accredited by the MHSSE. For example at the beginning 2019/2020 academic 5 Master programmes developed by CBHE projects were recognised and student quotas allocated. Among them the 2<sup>nd</sup> Call project – ECCUM team of the Urgench State University got approval of quotas for a new Master programme in Mathematical Engineering, which has been also included in Higher Education Classifier. With the support of two national banks responsible for grants and in cooperation with MHSSE the complete switch to the use of university bank accounts for Erasmus+ grant was ensured and thus the local project ownership was enhanced. Thanks to this positive development the Tashkent University of Information Technologies has become the first-ever grantholder of Erasmus+ CBHE project from Uzbekistan (SpaceCO project-2019).

### **2.3.1. Impact of projects at national/regional levels**

A series of field monitoring (FM) visits have shown that the national CBHE projects have constructive project results, which provide essential innovations and considerable results with significant impact on the higher education system. As an example, in the framework of the NURSLIN project aimed at the development of the guidelines for the elaboration and recognition of Qualifications and the National Qualification Framework (NQF) the consortium has undertaken deep comparative analysis of NQFs of local and the EU countries. The project submitted valuable recommendations to the Ministry of Higher and Secondary Specialised Education for development of the NQF considering the Bologna process principles. The first NQF of Uzbekistan was introduced on 18 May 2020.

Structural projects also have high potential in the view of the national impact. The project “Internationalisation and Modernisation of Education and Processes in the Higher Education of Uzbekistan” (IMEP) was coordinated by the MHSSE. The consortium developed Continuing Professional Development (CPD) training modules

for teachers based on the EU best practices. Nowadays the modules are used at teacher retraining centres in all regions of Uzbekistan.

### **2.3.2. Impact of projects at the institutional level**

Field monitoring of the curricula development projects presented the evidence of considerable impact at the institutional level. Focusing mainly on teachers' capacity building and study materials' development all institutions involved in curricula development projects had an impact at the faculty and institutional level. For instance, the national project "Development of Master Programme in Renewable Energy Sources and Sustainable Environment" (RENES) consolidated and upgraded capacities of academic staff of six local HEIs for development of 12 new courses in the field of Renewable energy sources and Sustainable Environment. Six local HEIs have also benefited of new training laboratories equipped by modern photovoltaic equipment and photo thermal installations.

Another valuable factor of the institutional impact is the number of projects per university. The Tashkent University of Information Technologies (TUIT) in addition to previously completed 4 Tempus projects also benefited of 12 CBHE projects, including one on-going project in a capacity of grantholder. Tempus and Erasmus+ projects were considered as an asset of TUIT capacity to introduce ECTS starting from 2018-2019 academic year according to the Resolution No. 569 of the Cabinet of Ministers of the Republic of Uzbekistan from 24 July 2018.

### **2.3.3. Impact of projects at the individual level**

#### **2.3.3.1. Impact on the academic and administrative staff of universities**

Every single CBHE project has an impact on teaching, managerial, and administrative staff. The impact has been already identified even before the project's kick-off. First of all national and local coordinators actively communicate the NEO with organisational issues like PIC number and local teams' establishment. At this stage usually the institution's administration gets involved, as the NEO jointly with MHSSE communicates the university administration with a specific letter presenting the important steps for launching a new project, including the need to establish a project team according to the project objectives and to present the new project to the wider university community. Usually it ensures a good level of project ownership and proactive role of the local team members. In order to enhance the quality of the project implementation the main stakeholders (MHSSE, other related non-academic organisations and administration of the HEIs) have been continuously provided with EACEA feedback on the field monitoring translated into Uzbek. Moreover, their reaction to FM recommendations has been observed through meeting minutes with specific actions to be undertaken by the team and university administration.

### **2.3.3.2. Impact on students**

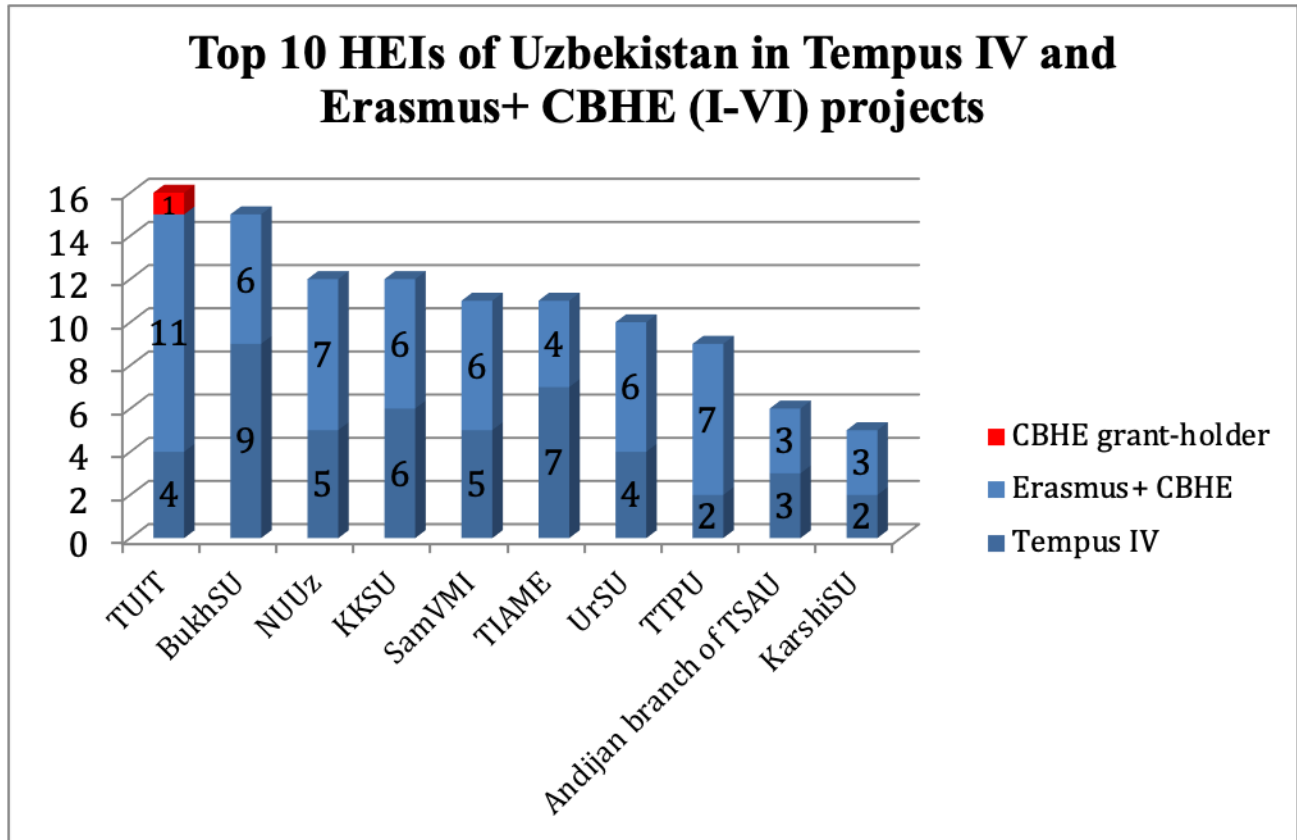
Several meetings with the local team during the monitoring visits showed that considerable impact at students can be seen in the CBHE projects, where EU and local partners have long and trust based partnership in a specific field. For instance the Samarkand Institute of Veterinary Medicine has close cooperation with German and Italian universities. In the framework of CBHE projects the local students visit the EU universities; even they do their internships at EU located farms. The similar case can be seen with the Tashkent Pediatric Medical Institute. In the framework of project “Technology in Rehabilitation” (TechReh) the students benefited from short term study visits in EU universities. Furthermore, they have used ICM opportunities as a follow-up of the CBHE project.

It should be highlighted that the Erasmus+ programme projects are well known among students with disabilities, as the programme encourages their participation in projects. The regional CBHE project: “Developing services for Individuals with Disabilities-DECIDE” gathered all students with disabilities from the partner institutions. During the monitoring visits, it was noted that the students were inspired to learn foreign languages and actively participate in project activities.

### **2.4. Results of the institutional monitoring analysis with engagement of an external expert**

The Institutional Monitoring (IM) was planned by the NEO also in view of the National Impact Study in order to obtain the contribution of the external expert, who undertook on-line IM meetings of 2 days each of two leading universities of Uzbekistan with the highest number of Tempus/Erasmus+ projects. Two universities were selected for the IM according to the degree of their involvement in Tempus and Erasmus+ project activities, based on the number of implemented Tempus and Erasmus+ CBHE projects (see Diagram 12).

**Diagram 12. 10 leading Uzbek HEIs in the Tempus IV and Erasmus+ CBHE projects (I-VI calls)**



According to Diagram 12, the first three places are occupied by the Tashkent University of Information Technologies (TUIT), Bukhara State University and the National University of Uzbekistan (NUUZ). For the first time in the history of Tempus and Erasmus+ CBHE projects, TUIT became the grantholder of the project, which demonstrates the capacity of the project teams in Uzbekistan, the high quality of applications with the participation of Uzbek HEIs and a certain level of trust of EACEA with regards to the HEIs of Uzbekistan.

For comparison, shown below is the national ranking of HEIs, where the same leading facilities are also ranked among the first: National University of Uzbekistan, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers (TIAME), Samarkand State University, Tashkent University of Information Technologies and Tashkent State Agrarian University. Besides, the global analytical agency in the field of higher education that maintains a the popular ranking of the best universities in the world has published the annual list of the best universities in developing countries of Europe and Central Asia in 2021 called QS Emerging Europe and Central Asia University Rankings 2021. It includes 400 best universities in the region, including four HEIs from Uzbekistan, two of which, namely NUUZ and TIAME, are also on the list of leaders in Diagram 12.

In 2018-2020 four Institutional Monitoring visits were carried out – to Samarkand Institute of Veterinary Medicine (SIVM) in 2018, to Tashkent University of Information Technologies named after Muhammad Al-Khwarizmi (TUIT) in 2019, in on-line format to Urgench State University (UrSU) and the National University of Uzbekistan (NUUZ) in 2020.

In all the Institutional Monitoring visits there were similarities with regard to the impacts at the individual, institutional, regional, and national levels. However, the impacts at the four levels at each of the four institutions had a number of individualities.

It is positive that **SIVM**'s staff have experienced the impact by learning new practices and ideas from the colleagues who were/are involved in the EU-funded actions. Around 1300 students at the bachelor and master levels of study were beneficiaries of those projects. They were/are enrolled on the new or updated study modules and on new or updated study programmes. In the result of the TOPAS project, a number of staff members have learnt how to arrange and continuously maintain effective dialogue with the labour market – different SMEs in the agricultural sector – for the implementation of students' internships and optimising students' employability through building up practice-based education and enhancing skills required by the labour market of the sector and beyond. Due to the implementation of the IQAT project the staff and students have become aware of the system of quality assurance working at the university which motivates staff and students to bear individual responsibility for the quality of their performance and achievement of the expected results in teaching and learning. Being involved in the implementation of the MIND project students have developed entrepreneurial skills and competences of capitalising ideas and social investments. About 10 courses (around 250 students on all of them) in Entrepreneurship, developed in the project, are annually offered to the SIVM students by the established MIND centre. In general, for students, participation in / benefitting from the projects and from mobility meant/means acquiring new knowledge, skills and competences, which have improved their study results, and which have significantly boosted their employability and the quality of their performance at work places. Participation of the staff gave/gives them a wide range of possibilities of their professional development. Some of them – 3 members of the SIVM staff – were promoted, the others have acquired new knowledge and skills that can enhance their research potential in the international perspective, improve their teaching performance at work, and boost their international cooperation capacities. The academic staff also got skills in using web-resources such as e-platforms for teaching/learning as well as English language communicative skills. The managerial staff, who took part in the projects, have built up skills in managerial solutions in what concerns internationalisation of the University, building student-centred environment, stimulating and enhancing university-enterprise cooperation, creating conditions for



innovative research, and assuring quality of higher education. The participating academic staff has learnt how to move to more student-centred learning and how to interact with the world of business. Teachers have learnt how to interact with potential employers to increase the quality of their study modules and formulate learning outcomes of the modules and study programmes. The staff now know about the existing strategies and practices of developing and modernising educational standards, applications of the Bologna principles of designing sectoral and national qualification frameworks.

At the institutional level, updating of the existing study programmes by adding new professional modules into the curricula and changing the syllabi, introducing new educational technologies, or developing new study programmes took place in the CIBELES, EPASAT SAMUZ, TOPAS, BUZNET, ACADEMICA, SPHERA, and UZWATER projects. The new practice of offering English language courses for the University staff and students is also important to mention. At the level of infrastructure, the Institute is in the possession of various sets of IT equipment and a hydrological laboratory, which have been purchased gradually with the funds of the different projects. There are 5 resource centres, 3 computer rooms and a laboratory established at the SIVM, where this equipment has been installed.

Regionally, the Institute has built workable relations with the local, regional, and national business environment for future designing result-oriented, competence-based and student-centred study programmes, for stimulating students' business-related activities, and further development of the regional labour market. Local and regional business representatives are invited to deliver classes within the newly developed study modules, which helps to raise the level of students' enthusiasm and active participation in societal developments.

It is worth stating that the impact at the national level is clear: all the EU projects have contributed to the development of the SIVM as a resource and training centre in agriculture for the region and the country by enhancing the results of education of its students, by producing more reliable and effective dialogue with the business sector and society at large. It is also worth noting that the SIVM has built partnership with several governmental bodies at the national level. Thus, it has contacts with the Ministry of Education, the State Veterinary Committee, the Ministry for Emergency Situations, the Ministry of Health, the State Committee for Nature Protection, the Ministry of Water Resources and the Ministry for Innovative Development. At the national level, SIVM is one of the most active promoters of the EU-funded projects in the country, and is a very active contributor to the modernisation of the national policies in the area of higher education, by making proposals to the MHSSE based on the results of some of its projects. Thus, 2 out of all the projects – e.g. the UZHEALTH and PAWER projects, both structural by character, – were fundamental in laying out the perspectives of a system of a sectoral qualification framework in the Public Health

sector compatible with the Ministerial directives and professional regulations (UZHELTH), and making Quality Assurance a constructional system underlying all the processes at a higher education institution and in the system of higher education at the national level (PAWER). These two projects, although carried out ahead in time to the national reforms, paved the road towards their set goals – the national government is now in the process of legitimating the sectoral qualification frameworks and has made an approach to a systematic vision of Quality Assurance. This makes the analysis of the impact of the EU-funded projects at the SIVM quite optimistic for the future.

In general, it is clear that the Tempus and Erasmus+ projects have significantly contributed to the internationalisation of the SIVM, both internally and externally. They increased regional, national, and international visibility of the institution, and enhanced its competitiveness and attractiveness.

**At TUIT** the impact at the individual level was positive: the trainings delivered in the projects by the EU partner institutions both in the EU, in Uzbekistan, and in the other Partner Countries, gave the participating academic staff an opportunity to upgrade their knowledge in subject-related areas and professional and pedagogical skills as well as obtain new skills and competences. They all were/are used for the modernising the existing and developing new study programmes, the establishment of the new structures – laboratories and centres, the introduction of elements of quality assurance, formulating learning outcomes for new understanding of qualifications, and establishing relations with authorities, enterprises, and with society. The upgraded and new skills have led the teaching staff to the use of innovative pedagogical approaches, methods of teaching and learning and educational technologies. The managerial staff, who took part in the project, built up skills in working out managerial solutions in the strategic issues such as internationalisation, development of quality culture, building student-centred environment, stimulating and enhancing university-society links and relations with enterprises.

At the institutional level, all the modernised and new study programmes developed in the HEICA, GREB, INTRAS, NMPLIS and TECHRECH projects have been accredited and are run with continuous enrolment of students. Besides, it is worth pointing out that some of the newly developed study programmes and study modules, such as, for example, Computer and Software Engineering, Renewable Energy, Precision Agriculture, and Computer Systems in Medicine, are brand-new in Uzbekistan and are relevant to the most recent developments of the national economy, which signifies impact at the institutional and national levels altogether. In all the curriculum development projects the issues of the Bologna system were/are mentioned as central to all the developments in the actions, but, in reality, only the introduction and use of the ECTS and some elements, not the whole system, of the internal quality assurance (e.g. accreditation of study programmes), has been focused on at TUIT so far. Participation of the university in a series of Tempus, Erasmus Mundus, Erasmus+

CBHE and ICM projects allowed TUIT to develop certain improvements at the level of university governance and management. For example, thanks for the QUEECA and UNIQTOOL projects, new approaches and attitudes to quality assurance were introduced at the policy-making level and in 2017 a Quality Assurance Office was established at TUIT. The Office is responsible for quality checks, monitoring, and accreditation of study programmes. At the same time, it is unclear how the Office collaborates with the other central services and the academic departments at the university to enhance the quality of education. What is notable is the development, application and use of different e-platforms, for example, in project management (the “HEICA Board”), in comparing accreditation processes with EU partners and accreditation agencies (the “Transfer Platform” in the QUEECA project), the MOODLE platform for e- and b-learning, and virtual classrooms.

The impact at the national level can also be pointed out. The University has managed to establish workable relations with enterprises and wider society, with other higher education institutions across Uzbekistan, and with the national authorities in the country. As an example of such interaction within one of the Tempus projects (NMPLIS), a new national law – “Library and Information in Uzbekistan” – was adopted. An interesting innovation which was welcomed by the national Ministry of Higher and Secondary Specialised Education had been adapted at TUIT – the Problem-Based and Project-Based learning – though the ITEM project. The methods were recommended by the Ministry to the other Uzbek universities as one of the good practices in the country. Similar impacts at the individual level were noticed at UrSU and NUUz in what relates to the skills and knowledge that the staff participating in the projects gained in the actions. At the same time, it is important to notice the individual impacts of the different projects at the institutional and national levels.

At the institutional level, all the Tempus and Erasmus+ Capacity-Building projects established parts of the UrSU’s infrastructure – laboratories, resource rooms, and communication centres. Most of the centres established within the projects represent resource rooms either used for training students or conducting research. A good example of such facilities is the Tempus PERSEUS project within which a REDIC resource centre (Research Development and Innovation Centre-REDIC) was established at the university, which is still operating, though with aims and functions different from what was formulated during the lifetime of the project. As a sort of continuation of the CANDI project of the Tempus programme, the ECCUM project of the Erasmus+ CBHE programme managed to establish a computing centre used at UrSU as a resource centre for the newly developed master-level study programme in Mathematical Engineering, which is new in the country. This produced an impact at the institutional level: (1) a new study programme was launched with 25 master students enrolled in 2020, (2) a new academic department was established under the order of the MHSSE. These things made it possible to enlarge the direct impact of the project – a

new bachelor programme was also developed and started at the university and new PhD students in the field of Mathematical Engineering. During the project there were initiatives to develop a double-degree study programme in the field. It has not been released yet but has potent chances to be elaborated and launched in the future. A strong institutional impact was achieved in the project: a new bachelor-level study programme in Urban Planning and Engineering was developed and launched with up to 85 students graduating every year. At the international level networking between UrSU and Russian and German partners was established through which joint students' projects were carried out. This practice is still ongoing. A spin-off effect was achieved in the project - quite recently a double-degree study programme in the field of Architecture and Landscape Design was developed and piloted together with a Belarusian university. Another spin-off effect was reached through the development of university-enterprise cooperation on the example of the Slovenian cluster the participants of the project on the side of UrSU learnt. The impact of the national RENES project was significant – a new master-level study programme “Physics of renewable energy sources and sustainable environment” was developed and launched at Urgench State University with the help of the partners from the European Union. The programme was institutionally approved and accredited at the national level in 2018. Since then, every year 6 master students are enrolled on the programme. At the Physics Department a laboratory of renewable energy sources was established, which has become a solid resource base for the research in this important area of the national economy. An integral part of this project, as the result of international cooperation, a reference base was established for new research and for the updated curriculum. In the result of this project new levels of cooperation became possible in the field of higher education in renewable energy sources and sustainable development. Thus, a New Norwegian and Chinese project has started recently and a new application for a CBHE Erasmus+ project and an application for the national funding have been planned. The EPCA regional project has managed to develop and run 3 new blended courses for 62 students enrolled in the current academic year. The fields of Disaster Risk Management with Spatial Data as methods of environmental protection are new in Uzbekistan. Therefore, the results of the project are welcomed not only by the university but also by the national government. At present, a proposal for national funding of the research and further academic development has been submitted. Strong impact at the institutional level was produced by the CLASS project – a new centre for intelligent big data analysis, which is used for teaching and learning on the newly developed and updated study modules in the respective fields, as well as for research. Through the established centres the regional and international networking became active and is running at present, which demonstrates a slight but potential impact on further growth of cooperative links between the partners.

Another positive example of the long-term effect of the EU-funded projects in Uzbekistan is the RENES CBHE Erasmus+ project. The impact on the national level is evident – the research and participation of academics in the national debates made it possible to adopt a national regulation on energy resources in Uzbekistan (decree of the President) on 22 August 2019 – <https://uza.uz/ru/posts/ob-uskorenykh-merakh-povysheniyu-energoeffektivnosti-otr-23-08-2019>

At the international level, the impact is also vivid: UrSU managed to solidify its academic image as a reliable partner with dedicated human resources able to participate in the internationally run projects, fully committed to work in the project and result-oriented activities. The university's project teams also managed to renew project ideas and formulate them together with their EU partners as well as partners in the other countries in the world, which proves the established and enhanced international relations, reliability of UrSU at the international level and its capacities that can build new practices based on internationally recognised best practices.

**At NUUz** it is noteworthy to observe the impact of the projects at the shared institutional and at the same time national levels. Thus, the university is involved in the projects that are aimed at the development of high-tech oriented study programmes, for example, GE-UZ and DSinGIS in GIS technology, FSAMP in ICT- and Space Technology based studies for flight safety and airworthiness), SPACECOM in Space Technologies, and NICOPA in GIS- and Space-technology based studies for precision making technologies in Agriculture. This shows that the areas are highly important for the country and have full support due to their relevance on the part of the national government in Uzbekistan. The UNICAC project was an important bridge between the two levels at the university – academic and administrative – and was successful in achieving its aims at the NUUz. The International Relations Department was updated with its services and responsibilities. Internationalisation became one of the strategic goals and pivots of academic development at the institution.

It is important to note that the strong orientation of the NUUz to its internationalisation and continuous support of widening international cooperation and participation in EU-funded projects by the university's top managers contribute to the exploitation of the projects' results and stimulate the university's staff to participate in capacity-building actions. Another positive experience the NUUz has had through the Capacity Building projects aimed at curriculum development (e.g. NICOPA – bachelor and master study courses in Precision Agriculture – and CLASS – master study programme in Computational Linguistics) is introduction of the interdisciplinary approach to the development of study programmes. This will bring in other academic innovations for the further updates in the existing study programmes and an impetus for elaborating new ones together with the NUUz's EU partners within or without capacity-building projects.

At the national level, due to the projects NUUz managed to build cooperative links with the Ministry of Higher and Secondary Specialised Education of Uzbekistan to achieve the best effects and increase the level of impact of its Tempus and CBHE Erasmus+ projects at the regional and national levels. The Ministry supports internationalisation of academic developments at the universities in the country and, therefore, promotes the EU-funded projects in the country and accepts proposals from the NUUz and the other universities most active in running projects financed by the European Union. A positive experience of enlarging cooperation between the university and stakeholders in society at the national level has been gained by the NUUz through the UZWATER Tempus project. The continuous interaction with departments for applied ecology, sustainable development, and water resources demonstrated their effects at the national level. Thus, the MHSSE of Uzbekistan turned straight to the study programme in water resource management and sustainable development and supported its further development at the university and in the country.

### **2.5. Relationships between CBHE and ICM projects**

In addition to the Capacity Building in Higher Education action, the Erasmus+ programme funded by the Commission of the European Union also offers the partner countries an International Credit Mobility action, which substantially adds the former. ICM projects are aimed at supporting the academic mobility of students, teachers and HEI staff, as well as strengthening cooperation between universities. Students of HEIs around the world have the opportunity to continue their studies at various universities in the countries of the European Union, and teachers are able to engage in research and/or teach students at European universities.

International credit mobility is focused on proactive mobilisation of students and teachers from countries that are not members of the European Union, which is crucial for Uzbek HEIs during the transition to a credit system.

For example, the most active HEIs participating in CBHE, such as NUUz, TUIT, TIAME, UrSU, SIVM, Karakalpak State University (KKSU) and Turin Polytechnic University in Tashkent (TTPU) are also involved in ICM projects.

In the course of the study, examples of the relationship between the Tempus, CBHE and ICM projects were identified. For example, European partners under Tempus projects at Bukhara State University, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers and Urgench State University used the new ICM area to resume cooperation with former Tempus partners and current Erasmus+ partners.

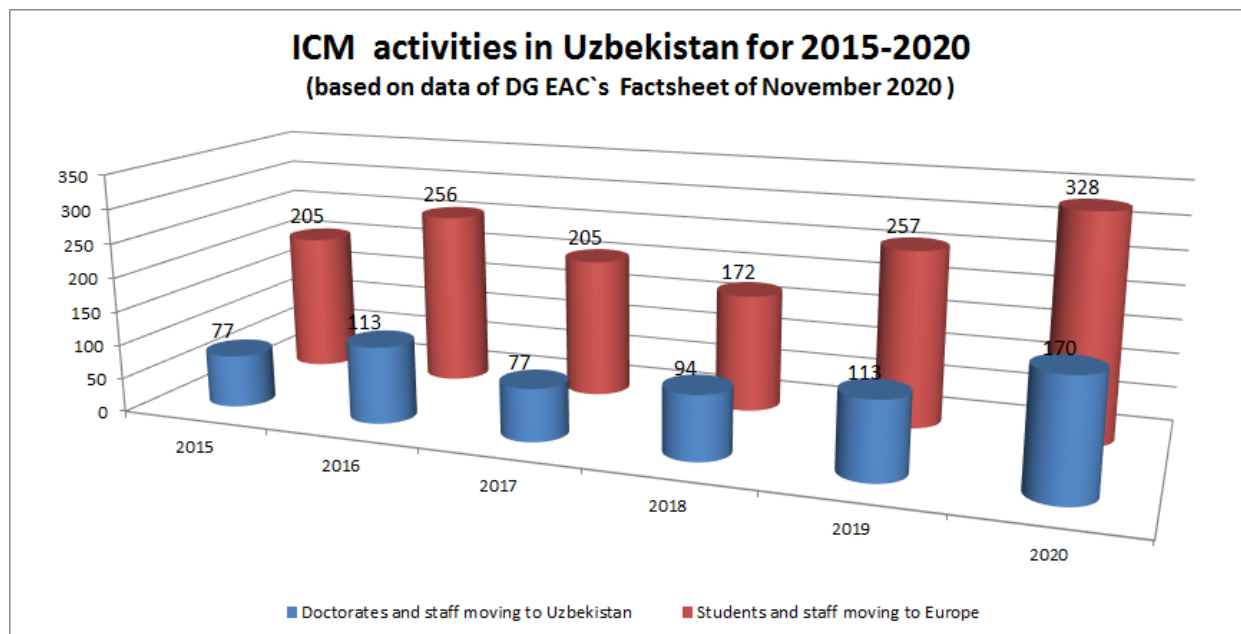
ICM participants from among HEI faculty and administrative staff have repeatedly noted that short-term internships in European universities helped acquire advanced

experience in the field, and then introduce and adapt it at their facilities.<sup>6</sup> Students, on the other hand, had the opportunity to get exposure to the European education system, and then, upon returning, exchange experiences with other students and with the teachers at their university. The students and faculty who visited European universities and adopted best practices were definitely able to enhance capacity building opportunities of CBHE projects.

### 2.5.1. Quantitative analysis of ICM projects in Uzbekistan

In total, as a result of the 2015-2020 calls and due to these projects, 2,067 short-term mobility exchanges were carried out, with participation from more than 45 national HEIs. In total, 1,423 students, doctoral students and lecturers from Uzbekistan were involved in mobility, and 644 participants, including doctoral students and lecturers of European universities, visited Uzbekistan (see Diagram 13) under 432 partnerships with European universities.

**Diagram 13. ICM activities in Uzbekistan in 2015-2020\***



**\* based on data of DG EAC's Factsheet of November 2020**

Thus, the mobility of Uzbekistan students and HEI teaching staff is more than 2 times higher than the mobility from EU universities to Uzbekistan. The scale of the ICM action is quite comparable to the scale of all other scholarship programmes, both national and international, and in some cases exceeds it many times.

<sup>6</sup> Annual ICM conference2020 and conference proceedings  
[http://www.erasmusplus.uz/images/shared/file/ICM%20publication\\_latest\\_07\\_01\\_2021.pdf](http://www.erasmusplus.uz/images/shared/file/ICM%20publication_latest_07_01_2021.pdf)

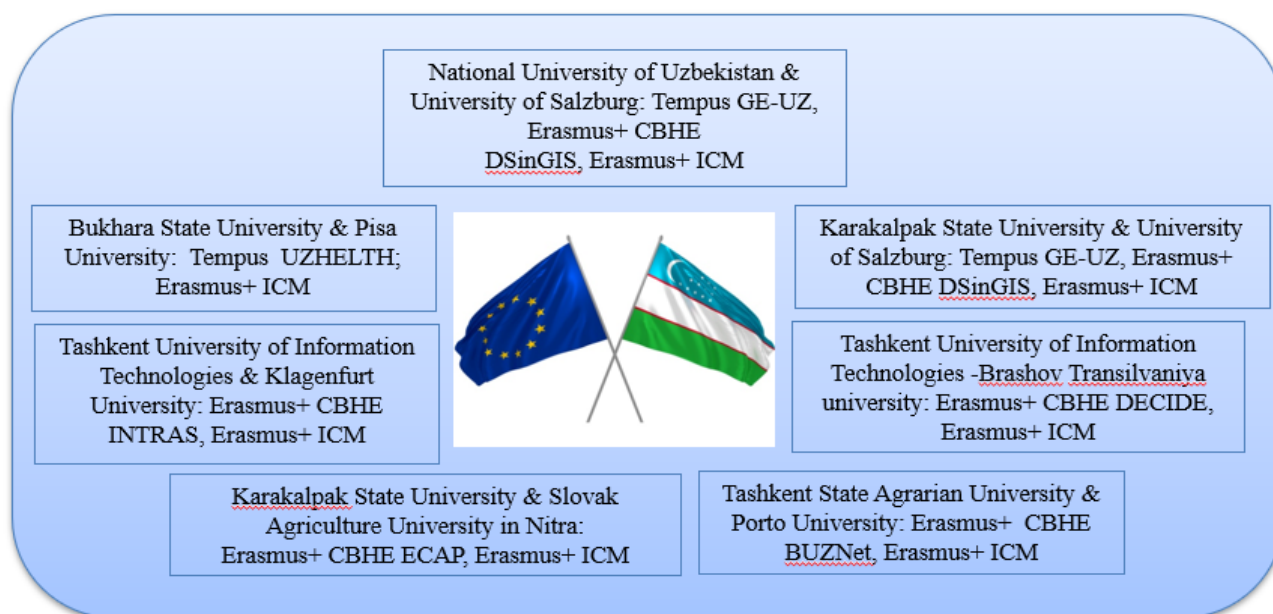
## 2.5.2. Continuity and synergy of CBHE and ICM projects

Most of the ICM projects with the participation of Uzbek HEIs are based on cooperation established by the joint implementation of CBHE projects. The mutually beneficial combination of simultaneous participation in CBHE and ICM projects was many times noted by the members of project teams in the national HEIs. Within the framework of mobility, opportunities for advanced training are used in the course of implementation of CBHE projects.

ICM partnerships support the CBHE projects aimed at improving curriculum, expanding opportunities for professional development and exchanging experience in universities of EU member states. A good example of this relationship is the cooperation of the National University of Uzbekistan and the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers with Paris Lodron University of Salzburg (PLUS) in Austria at the same time under the CBHE DSINGIS project (<http://www.dsingis.eu/>) and the ICM partnership.

Due to participation in CBHE projects and the establishment of new partnerships, as well as effective interaction, European partners decided to develop cooperation under the ICM as well. It allows to expand cooperation and exchange of faculty and students. For example, the cooperation of TSAU with the University of Porto initiated under the framework of BUZNET (<https://buznet.up.pt>) was expanded due to winning an ICM project, as which is also the case for a number of other universities, and they also used the opportunity to deepen and expand bilateral cooperation (see Figure 3).

**Figure 3. Synergy of CBHE and ICM projects**





### **2.5.3 Impact on academic and administrative staff of universities**

Improved academic mobility in the national HEIs has significantly contributed to the increase in education accessibility, improvement of quality and efficacy of education, as well as improvement of functioning of international departments, mutual recognition and ensuring the mobility of human capital.

ICM partnerships serve as a guarantee of continued cooperation under the joint projects, which contributes to further study of advanced pedagogical technologies, improvement of the development of curricula and teaching materials based on international best practices, improvement of teaching quality and increasing efficiency of the international and student service units.

For 6 years, the key issue was the lack of knowledge of foreign languages. In order to address this, teaching of academic and administrative staff of HEIs was organized.

The advantages of mobility for administrative staff and faculty are as follows:

- lecturing and teaching classes;
- participation in scientific activities on joint topics;
- participation in professional development programmes;
- acquaintance with the experience of international partners;
- participation in conferences and workshops.

The faculty and administrative staff of departments in HEIs that were not directly involved in ICM projects had the opportunity to acquire certain experience and knowledge from their colleagues through workshops conducted by participants of mobility to Europe.

Short-term mobility in European universities has become an important tool for the faculty supporting their professional and personal development, due to the unique opportunity to enhance their qualifications and come back with new teaching approaches and methods.

Mobility projects also helped in establishing friendly contacts with colleagues at partner universities, which was followed by the publication of joint scientific papers and articles, invitations to international events and exhibitions, as well as submitting new project proposals and joint participation in the next ICM projects or in other areas of the Erasmus+ programme.

Currently in the national HEIs the period of mobility for the faculty and administrative personnel is recognized as professional development. Due to the government decisions on the introduction of a credit and module system in 35 national HEIs from the 2020-2021 academic year, and the transition to ECTS for all HEIs, the mobility experience in European universities has become even more popular and recognized. In the

welcoming speeches of the MHSSE management at Erasmus events there was a reiteration of a direct connection and influence of the EU funded Erasmus+ programme on the adoption of the key decision on the transition to ECTS as one of the key instruments for the internationalization of higher education. Particular importance is attached to increasing the involvement of professors and doctoral students from European universities in the teaching process of the national HEIs, as they can visit under the credit mobility initiative. More than 640 representatives of European universities took the opportunity to lecture and conduct classes, workshops and master classes at the national HEIs. Due to this, many Uzbek lecturers and students were able to build their qualifications without leaving the country. In addition to the academic activities, the visits of the European partners facilitated the increase in the number of joint scientific works and joint research in scientific centres and laboratories, development of joint publications and expansion of scientific contacts in general.

#### **2.5.4 Impact on students**

Favourable environment has been created in the Uzbek HEIs for the development of academic mobility of students and researchers. Through participation in mobility partnerships, students and researchers gain access to better quality education and research programmes and return to their home institutions with new knowledge.

Experience of studying abroad provides graduates with the ability to work in an intercultural and global international professional environment.

Disciplines or modules in the relevant specialties taken at the partner university are recognized by the parties, and the credits earned are automatically recalculated. ICM projects contributed to development of recognition tools and procedures for short-term mobility through assignment of new tasks for staff of academic departments of HEIs and their relationships with international relations departments.

International student mobility has become one of the most effective ways to develop educational and intellectual opportunities at the individual level.

An important factor is that the mobility participants were able to improve their knowledge of a foreign language. Some partnerships have provided free language courses.

In recent years, many Uzbek HEIs have introduced numerous English language programmes, which is one of the most significant factors for the successful attraction of intellectual resources.

Due to the efficiency of the programme, a number of HEIs now additionally allocate their own funds to finance the mobility of students and doctoral students for internships at partner universities.

## 2.6. Erasmus+ projects and Covid-19 pandemic in Uzbekistan

During preparation for the on-line Regional Cluster Meeting on the topic "Impact of capacity building projects in the field of higher education in Central Asia" held from November 19-20, 2020, a mini-study on the impact of the Covid-19 pandemic on the activities of Erasmus+ projects in Uzbekistan in 2020 was conducted.

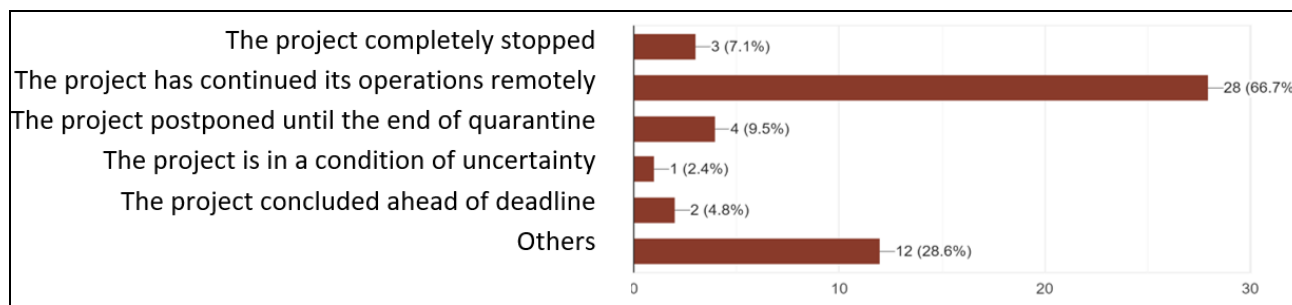
The study itself was carried out in October and November 2020 by filling out an online questionnaire and covered a number of issues related to the implementation of Erasmus+ projects, interaction and communication with stakeholders and a subjective assessment of the status of projects during the coronavirus pandemic.

The questionnaire was sent to the international departments of HEIs and to the coordinators of Erasmus+ projects in Uzbekistan. A total of 42 responses were received, and some of them are presented below in this study.

For instance, the question "What happened to your Erasmus+ project after the introduction of quarantine measures against Covid-19 in the Republic of Uzbekistan?" the majority of respondents (about 70%) noted that their project continued to work remotely, or even that the project team finished their project ahead of schedule, and only about 7% answered that their project had to completely suspend its activities.

### **Question: What has happened to your projects after the quarantine measure were announced?**

42 responses



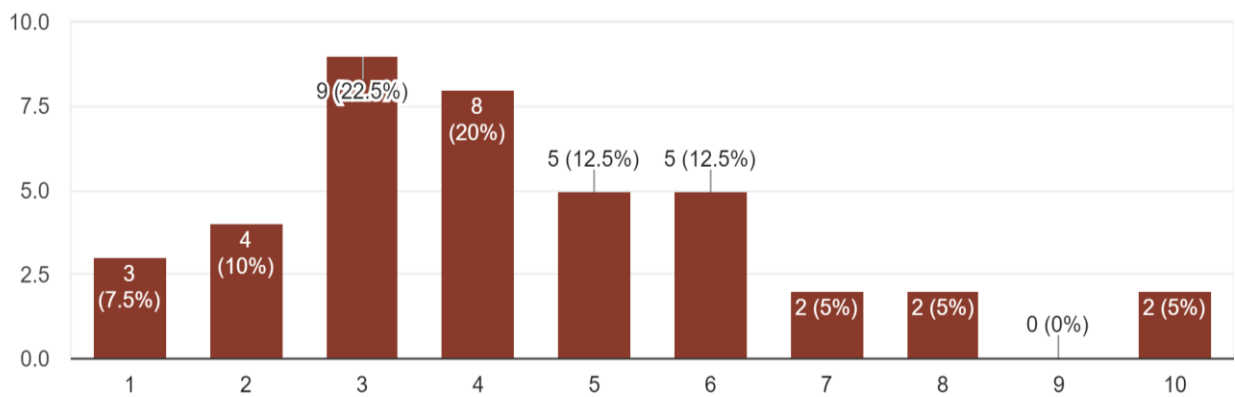
In the course of this study, the authors also interviewed respondents about the fate of existing projects during the quarantine period and the Covid-19 pandemic, and in general the participants agreed that most of them managed to continue their work remotely through online conferences and webinars. However, a number of CBHE and ICM projects had to either move mobility to an indefinite period later in the project lifetime, or to replace physical mobility with virtual alternative through distance learning and exchange of experience.

When asked about the level of impact of Covid-19 on project activities under the Erasmus+ programme, the majority of participants (more than 80%) noted that in general the level of achieving the goals and objectives set by the project was below its average value.

However, experts and focus group participants, especially students, expressed deep regret that physical mobility could not take place or had to be modified (many participants were in the lockdown and could not attend European universities because of the quarantine measures taken) during the interviews.

**Question: How would you evaluate the level of impact of Covid-19 on your Erasmus+ project?**

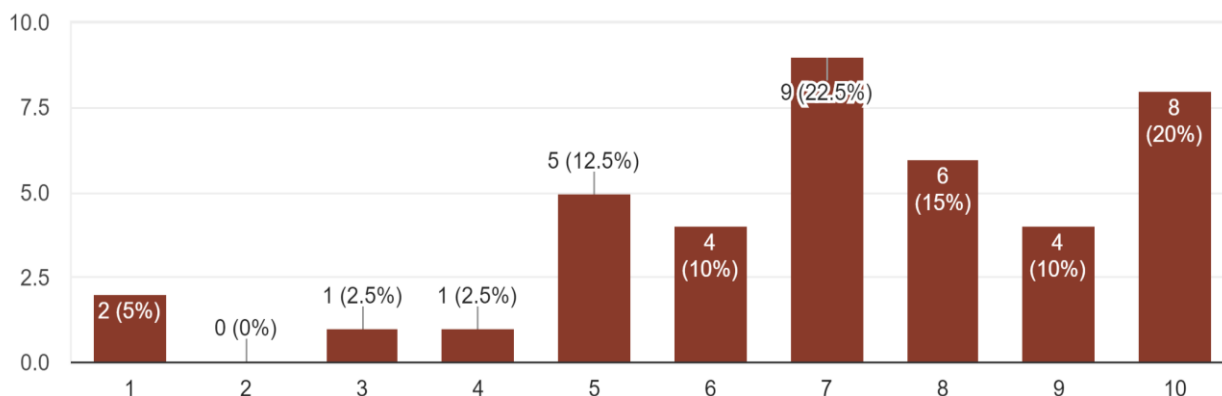
40 responses



The responders were asked a question about the role of EU partners during the quarantine period to understand the level of interaction and communication between the Uzbek and European partners.

## Question: How would you evaluate the role of Erasmus+ project partners from EU during the period of Covid-19?

40 responses

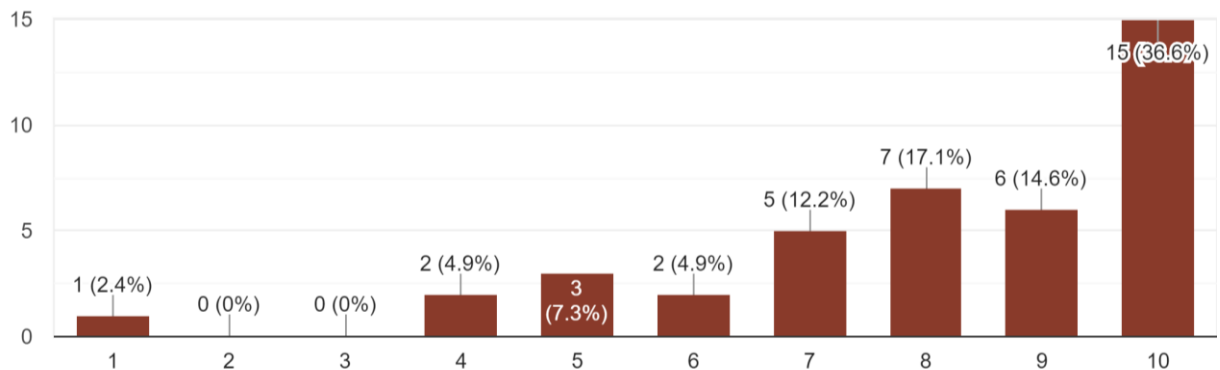


As can be seen from the diagram showing the responses which were also confirmed during oral interviews during this study, 90% of respondents score the role of European partners and its importance for continuing the project and maintaining the communication with Uzbek partners as 5 points and above. The respondents also repeatedly expressed their deep gratitude for the leadership and support of European partners in this difficult period.

Given the difficult period of the Covid-19 pandemic faced by the whole world, including the EU and Central Asian countries, it was important for us to find out how the level of support from the National Erasmus+ Office in Uzbekistan was perceived. This survey was conducted anonymously and without prior discussion with NEO staff in order to eliminate systemic errors and bias. These answers are shown in the diagram below, and in addition, during expert interviews and a survey in focus groups the participants evaluated NEO activities in the most positive way.

## Question: What is the level of support that your project received from NEO?

41 responses



As can be seen from the diagram above, more than 90% of respondents assess the level of support for NEO in Uzbekistan as above average; moreover, more than 50% of them indicated that this level of support and its importance for project teams could not be higher.

In general, according to the participants in this study, the members of project teams and consortia of Erasmus+ projects managed to cope with the difficulties associated with the Covid-19 pandemic and the mandatory quarantine measures quite well. Moreover, in the opinion of all respondents, the level of trust and intensity of cooperation under international activities, including within the framework of the Erasmus + partnership, has increased manyfold.

### 3. Examples of Erasmus+ CBHE projects

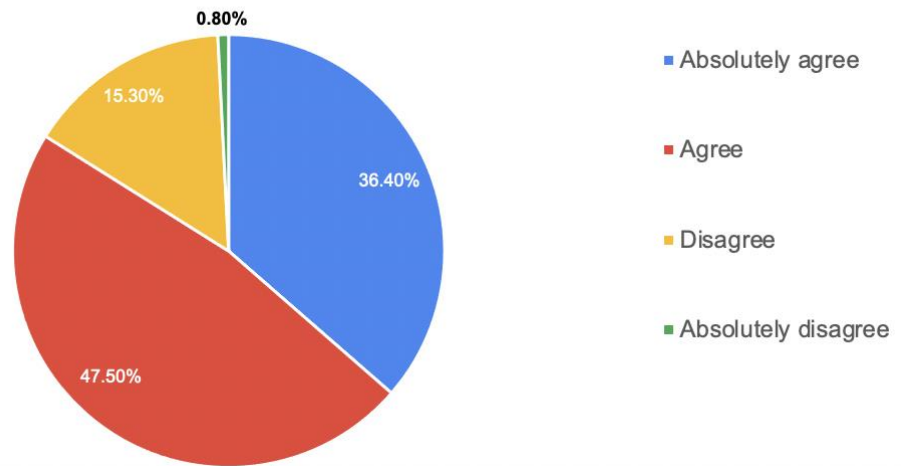
#### 3.1. CBHE projects that impacted higher education reforms

The Erasmus + programme is the world's only large-scale technical assistance programme to support reform and modernization of higher education. As indicated in the foreword above, the systemic impact of the Tempus and Erasmus+ projects on the development of the higher education system in the Republic of Uzbekistan is a proven fact and is beyond doubt. Therefore, this section will present a number of examples substantiating the overall impact assessment of the Erasmus+ programme.

##### 3.1.1. National/regional level

21. How much do you agree with the following statement: Participation in the Erasmus+ projects has allowed to strengthen partnerships and establish new cooperation with business/industry?

118 responses




It was especially important for the NIS authors to assess the impact of the Erasmus+ programme at the national and regional levels. For this purpose, a number of questions were asked to assess the impact of projects at the national level, focus groups discussions and expert interviews with the participation of opinion leaders and coordinators of CBHE structural projects were held, and respective questions were asked in an online survey.

About 84% of survey participants agreed with the statement that the impact of Erasmus+ projects on strengthening partnerships and establishing new cooperation with business and industry was significant, and about 16% of respondents did not agree with this statement.

In this regard, the experience of the RUECVET project (**Piloting RUECVET to the national VET system of Russia and Uzbekistan**) was interesting. It was aimed at the

pilot launch of the European Credit System (ECVET) within the national systems of vocational training and education in Russia and Uzbekistan.

<b>Logo of the project</b>	
<b>Title and number of the project</b>	<b>RUECVET: Piloting ECVET to the national VET system of Russia and Uzbekistan</b> 574097-EPP-1-2016-1-CY-EPPKA2-CBHE-JP
<b>Project duration</b>	15/10/2016 - 14/10/2019
<b>Web-site</b>	<a href="http://www.ruecvet.uz/ru/">www.ruecvet.uz/ru/</a>
<b>Main achieved results</b>	<ol style="list-style-type: none"> <li>1. Recommendations for the implementation of ECVET in the national system of higher and vocational education have been developed;</li> <li>2. 4 national ECVET training centers have been established in local universities;</li> <li>3. Quality assurance mechanism established and quality indicators / specifications agreed;</li> <li>4. A professional development programme has been developed for the implementation of the ECTS credit system in secondary vocational education and training in Uzbekistan.</li> </ol>

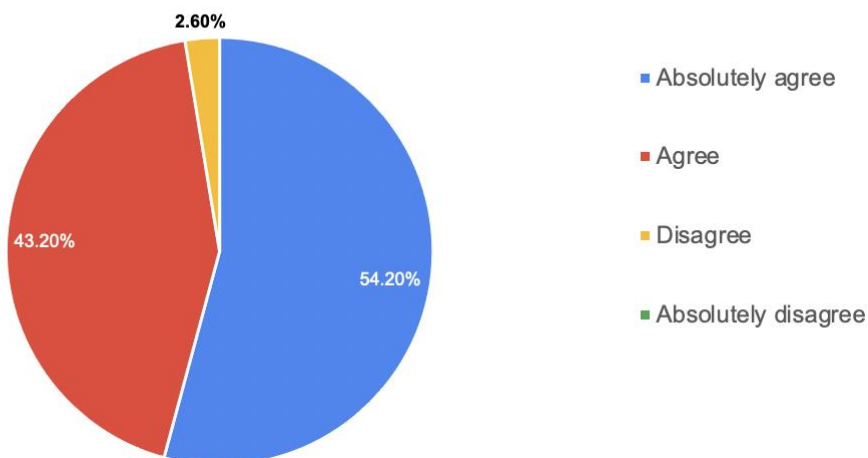
Shown below are the responses to the question about the impact of projects on the modernization of higher education system of the Republic of Uzbekistan.

More than 97% of survey participants agreed with the statement that the impact of Erasmus + projects in the reform and modernization of higher education in Uzbekistan was significant, and about 3% of respondents did not agree with this statement.




24. How much do you agree with the following statement: Participation in the Erasmus+ projects has contributed to the reforms and modernization of higher education in Uzbekistan?

118 responses



In particular, let us consider the example of the following project - **IMEP: Internationalization and Modernization of Education and Processes in the Higher Education of Uzbekistan**, with the main goal to provide assistance in the field of internationalization and modernization of education and processes in the field of higher education in Uzbekistan.

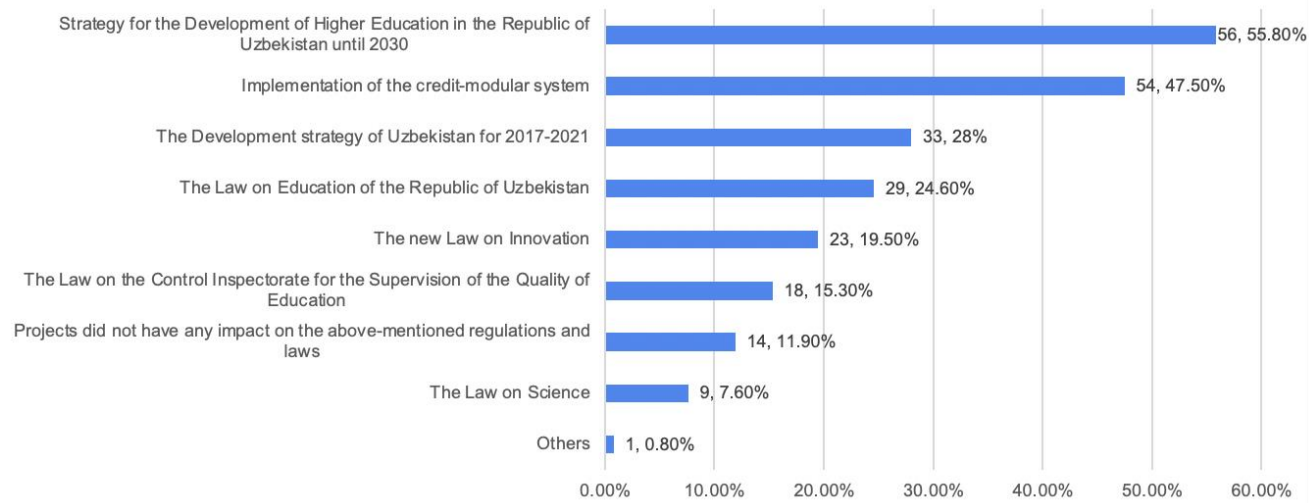
<b>Logo of the project</b>	
<b>Title and number of the project</b>	<b>IMEP: Internationalisation and modernisation of education and processes in Higher Education of Uzbekistan</b> 561624-EPP-1-2015-1-UK-EPPKA2-CBHE-SP
<b>Project duration</b>	15/10/2015 – 14/10/2018
<b>Main achieved results</b>	1. Modernized curricula and programmes of retraining and advanced training courses for teachers of higher educational institutions have been developed. For upgrading courses and advanced training of university teachers, 288 educational and methodological complexes have been prepared on the basis of 325 foreign educational literatures; 2. Developed and approved by the order of the Ministry of Higher and Secondary Specialised Education "Qualification requirements for the level of readiness of the teaching staff of higher educational institutions»;

	<p>3. Proposals have been submitted for the State Programme for the Integrated Development of the Higher Education System for the period 2017-2021 to modernize curricula and programmes taking into account the best foreign experience and to further improve the system of retraining and advanced training of teachers of higher educational institutions through the organization of advanced internships, training of teachers in foreign partner universities.</p>
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The project outcomes were strongly supported by the MHSSE and were widely introduced into practice in order to improve the qualifications of senior staff and in general to improve the arrangements for professional development of the academic staff. Taking into account the ongoing changes in Uzbekistan, it was important to understand how the project results influenced the public legal documents, laws or government initiatives, and we received the following answers from the respondents of the online survey.

Respondents to this question could choose more than one answer and in slightly less than half of them mentioned two regulatory documents as specific impact from the Erasmus+ projects: 1) Strategy for the Development of Higher Education in the Republic of Uzbekistan until 2030 and 2) Implementation of a Credit and Module system. Further, the following two documents were noted by about 1/3 of respondents: 3) Development Strategy of Uzbekistan for 2017-2021 and 4) Law on Education of the Republic of Uzbekistan. About 20% of projects influenced the new Law on Innovations and less than 8% - the Law on Science. About 15% of Erasmus+ projects have had an impact on the development of decree on the State Inspectorate for the Supervision of the Quality of Education. And less than 12% noted that their projects did not have any impact on the above-mentioned regulations and laws. Thus, the project participants noted the real impact of their projects on the development and implementation of new regulations and laws that to a certain degree serve as a framework for the development of higher education in the Republic of Uzbekistan.

25. Indicate the normative document, law or government initiative where you and your project had an impact




As an example, **NURSLIN project: National qualification frameworks: guidelines for development and recognition of qualifications** can be considered. Its main goal was to facilitate development of the National Qualifications Framework for the higher education of the Republic of Uzbekistan. According to information of project team the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan "On measures to organize the activities of the National System for the Development of Professional Qualifications, Knowledge and Skills in the Republic of Uzbekistan" (No 287 dated May 15, 2020) was adopted, among alia, based on the results of this project.

<b>Logo of the project</b>	
<b>Title and number of the project</b>	<p align="center"><b>NURSLIN: National Qualification Frameworks: Guidelines for Development and Recognition of Qualifications</b> 561742-EPP-1-2015-1-PT-EPPKA2-CBHE-SP</p>
<b>Project duration</b>	<p align="center">15/10/2015 - 14/10/2018</p>
<b>Main achieved results</b>	<ol style="list-style-type: none"> <li>1. The general provisions concerning educational standards in specific fields have been improved, taking into account the idea of the Qualification Framework (QF), the principles of the Bologna Process and the experience of EU universities;</li> <li>2. New national standards on informatics have been introduced, which has contributed to the development of relevant sectoral information and communication technologies in the field of ICT;</li> <li>3. The staff of the local universities were trained in the training on QF issues, which are involved in the process of developing special courses on QF development.</li> </ol>

### 3.1.2. At the institutional level

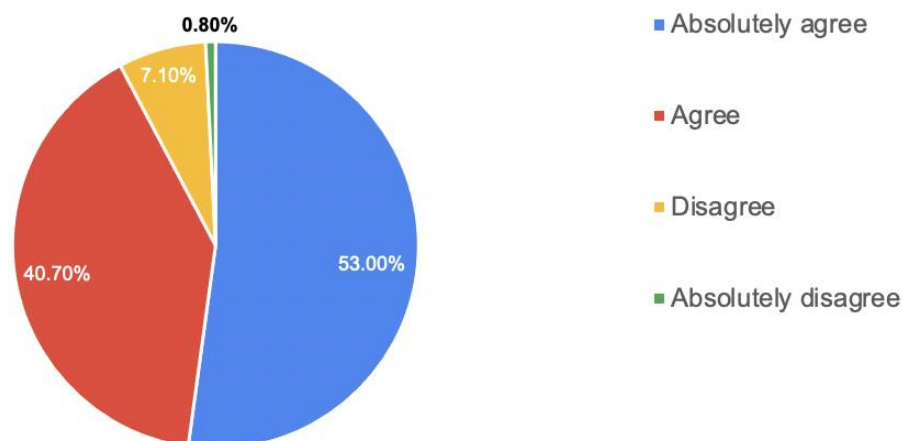
Absolutely all of the NIS study participants indicated that the Erasmus+ programme had the maximum effect on the launching of new curricula and areas of education. Below are the results of an online survey, where respondents indicated their opinion regarding the emergence of new curricula in their HEIs. This included development of new teaching materials, new methods for assessing the teaching process, new methods of working with students, colleagues and administration, new methods for managing the quality of education, introduction of elements of a credit and module system, and so on.

94% of respondents agreed with the statement that Erasmus+ projects helped introduce a new curriculum or area of education. About 6% of the respondents disagreed with this statement. Thus, the impact of the Erasmus + programme on the development of new areas of education is very significant. As an example, we can consider the **ECCUM project: Establishment of Computing Centers and Curriculum Development in Mathematical Engineering Master programme.**

<b>Logo of the project</b>	
<b>Title and number of the project</b>	<b>ECCUM: Establishment of Computing Centers and Curriculum Development in Mathematical Engineering Master programme</b> 561574-EPP-1-2015-1-ES-EPPKA2-CBHE-JP
<b>Project duration</b>	15/10/2015 - 14/10/2018
<b>Web-site</b>	<a href="http://eccum.famnit.upr.si/en/">http://eccum.famnit.upr.si/en/</a>
<b>Main achieved results</b>	<ol style="list-style-type: none"> <li>1. A Master's programme in mathematical engineering has been developed and opened;</li> <li>2. Mathematical engineering is included in the classifier of master's specialties of Uzbekistan, May 2017.</li> <li>3. Equipment and software packages purchased for computer centers and computer centers established at each partner university.</li> </ol>

13. How much do you agree with the following statement: Participation in the Erasmus+ projects allowed to open a new Bachelor's / Master's / Doctoral programmes

118 responses



On the issue of the development and implementation of new teaching and learning materials, there was also a full agreement with the statements about the high level of impact of the projects on the curricula modernization.

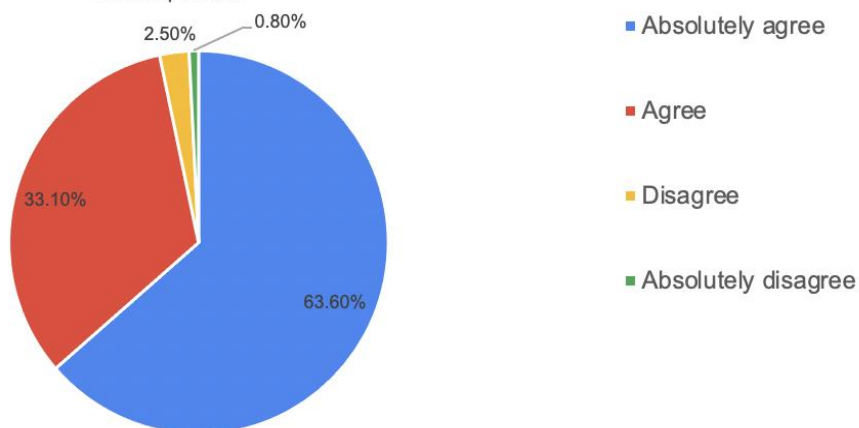
For example, the following 8 new Master programmes with allocated student quotas were accredited and well promoted during admission period of 2020/2021 academic year by the MHSSE through the website and social networks:

1. "CLASS" "5A120106- Computer linguistics" at 4 HEIs: NUUZ, TSUULL, SamFLI, UrSU
2. "ECCUM" "5A130301- Mathematical Engineering" at UrSU
3. "RENES" "5A140204- Renewable energy sources and sustainable environment physics" at UrSU, AndSU, GulSU, KarshSU
4. "INTRAS" "5A310609-Intellectual transport network" at Tashkent State Transport University, AndMBI, JizPI, TermezSU
5. "INTRAS" "5A350902-Intellectual IT network" at TUIT
6. "MECHAUZ" "5A312601-Mechatronics and Roboto technics" at AndMBI
7. "GE-UZ" "5A313401-Geodezy and Geoinformatics" at TIAME, NUUZ, TSACI, KKSU
8. "SPACECO" "5A350903- Satellite communication systems" at TUIT
9. "SPHERE" "5A440115- Veterinary control and public health in emergencies" at SamVMI

Sustainability of the Erasmus+ Master programmes is ensured by allocation of student quotas and continuous accreditation, duly justified by high level employability of graduates supported by the industry and enterprises.

14. How much do you agree with the following statement: Participation in the Erasmus+ projects has allowed to develop and implement the teaching materials?

118 responses



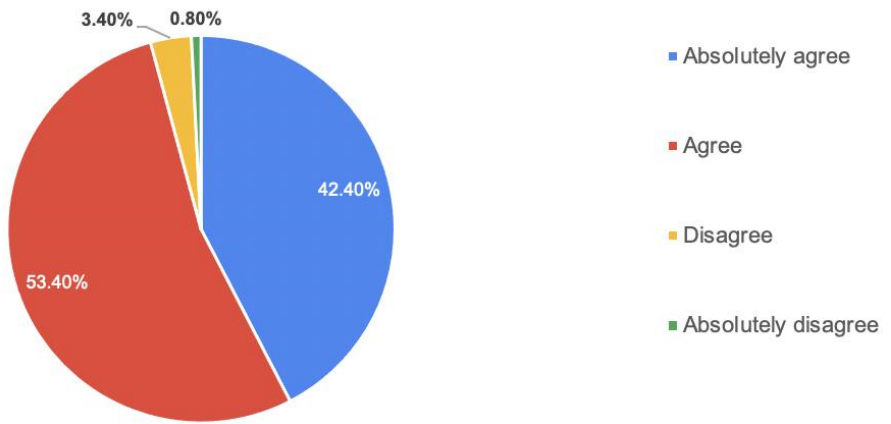
Further, 97% of survey participants agreed with the statement about the special impact of Erasmus+ projects on the development and introduction of new teaching and learning materials, and only about 3% of respondents did not agree with this statement. For example, the **ACADEMICA project: Accessibility and Harmonization of Higher Education in Central Asia through Curriculum Modernization and Development** can be considered.

<b>Logo of the project</b>	
<b>Title and number of the project</b>	<b>ACADEMICA: Accessibility and Harmonization of Higher Education in Central Asia through Curriculum Modernization and Development</b> 561553-EPP-1-2015-1-BG-EPPKA2-CBHE-JP
<b>Project duration</b>	15/10/2015 - 14/10/2018
<b>Main achieved results</b>	<ol style="list-style-type: none"> <li>1. Innovative methodologies implemented: ACADEMICA trainings combined methodology and content that provided lecturers with the cross-cutting and core competencies and skills needed for their active inclusion in the global digital learning and learning space.</li> <li>2. University programmes in the field of engineering sciences have been modernized with modern content and with integrated modern approaches based on technology;</li> </ol>

	3. Systems of transnational cooperation between universities and business organizations have been established to strengthen the capacity of universities.
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17. How much do you agree with the following statement: Participation in the Erasmus+ projects allowed to introduce new methods of quality control in education (polls of faculty, students, indicators, external quality assessment, etc.)?

118 responses



About 96% of survey participants agreed with the statement about the significant impact of Erasmus+ projects on the introduction of new methods of quality management in education, and only slightly more than 4% of respondents disagreed with this statement.

The **IQAT project: Enhancing capacities in implementation of institutional quality assurance systems and typology using Bologna process principles** was aimed at promoting the development of an institutional system for ensuring the quality of education in Uzbek HEIs.

<b>Logo of the project</b>	
<b>Title and number of the project</b>	<b>IQAT: Enhancing capacities in implementation of institutional quality assurance systems and typology using Bologna process principles</b> 561685-EPP-1-2015-1-CZ-EPPKA2-CBHE-JP
<b>Project duration</b>	15/10/2015 - 14/10/2017
<b>Main achieved results</b>	1. A new internal quality assurance system (QA) has been developed, innovative and modified in higher education institutions;

	<ol style="list-style-type: none"> <li>2. The final version of the QA Regulation has been prepared, taking into account state requirements/university charters and documents, as well as European standards and recommendations;</li> <li>3. Using the principles of the European Standard and recommendations for ensuring the quality of education in higher education institutions, an updated self-assessment system was developed;</li> <li>4. A quality assurance programme has been developed for the implementation of the self-assessment system in universities for the next years.</li> </ol>
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In addition, during expert polls and focus groups discussions, almost all respondents mentioned modernisation of HEI infrastructure through the development of resource centers, incubators, industrial parks, technology transfer centres, laboratories, etc. in the HEIs, which makes new or improved curricula more advanced academically.

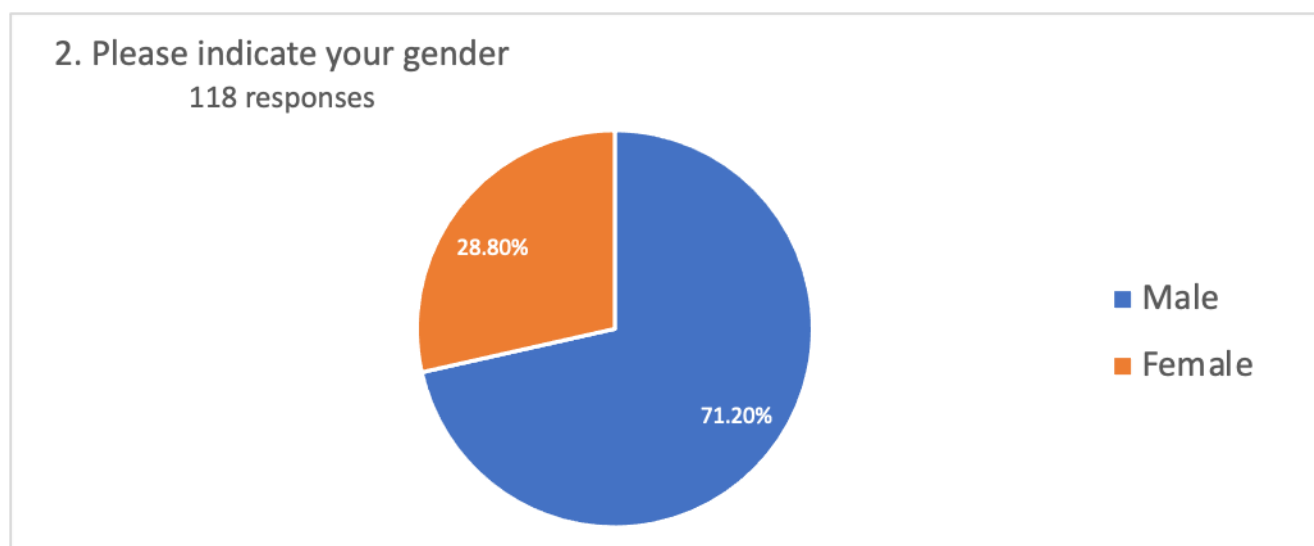
For example the laboratories established and equipped within completed RENES (Renewable Energy Sources), ECCUM (Mathematical Engineering), TechRech (Technologies in Medicine) projects are in disposal of Master students and are attracting the non-academic partners. CACTLE Centres for Teaching, Learning and Entrepreneurship contribute to improvement teaching competencies of academic staff and provide education for entrepreneurs Youth Centres created within MIND are well promoted by the MHSSE as good model and best practice to support entrepreneurship. The centers of Doctoral studies of UZ DOC 2.0 at the scientific departments of 7 local HEIs in all country regions are currently supporting activities of young researches and upgrading of academic staff, as well as promoting guidelines for virtual doctoral centres in other universities. Within the framework of the RUECVET project, two National ECVET training centres were created on the basis of pedagogical universities in order to provide practical support to universities and vocational education and training (VET) organisations for training, research, development of new practices and assistance in the implementation of the European Credit System (ECVET) in the systems of vocational education and training. Three Multidisciplinary “Green Building” centres in Uzbekistan HEIs are chains of the innovative Network of Multidisciplinary Centers “Green Building” (NGB), established and equipped by GREB project.



### 3.1.3. At the individual level

According to the analysis of the online survey, the impact of Erasmus+ projects at the individual level is basic for all of the participants. Moreover, this conclusion was also confirmed by participants of expert surveys and focus group participants. In this regard, the authors of the study consider it important to provide some examples of the analysis of the online survey and share its results. Some of the research questions were aimed to studying the gender composition of project participants, which highlighted the situation with the participation of women in projects, as well as their representation in the governing bodies of projects.

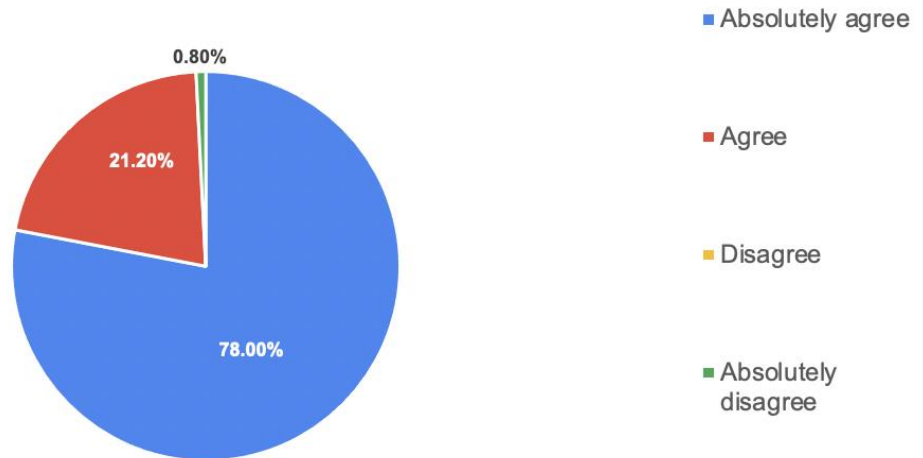
If we take the share of female leaders, such as project coordinators and heads of project teams from the side of HEIs, as the baseline, then the situation is as follows: out of 43 CBHE projects, 13 had female coordinators, which is one third, but if we take for the baseline the number of female national coordinators, then the numbers are much lower, corresponding to the share of 10%. In general, these data are correlate with the results of the online survey covering 118 people, and there were slightly less than one third of women.



### 3.1.3.1. Impact on academic and administrative staff of universities

12. How much do you agree with the following statement: Participation in the Erasmus+ projects has improved the qualifications of teachers

118 responses

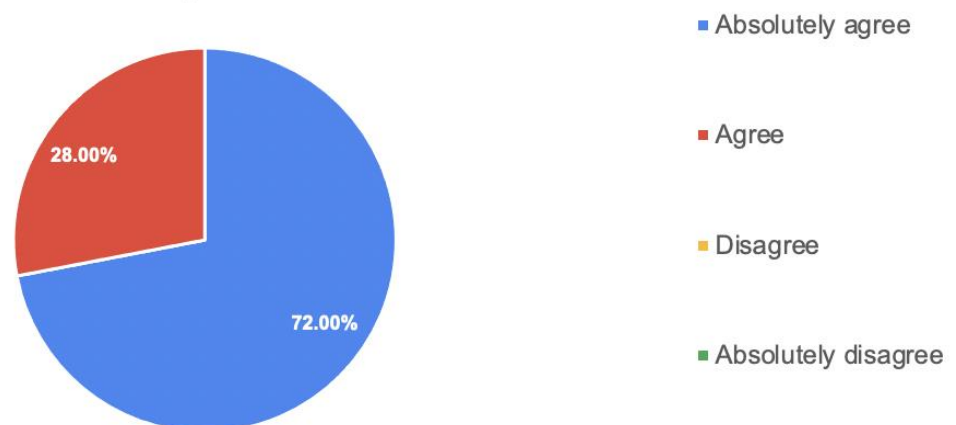


99% of the respondents agree with the statement that participation in Erasmus+ projects has improved the qualifications of the academic and administrative staff of universities, and only less than 1% of respondents disagreed with this statement. As a conclusion, based on the survey we can say with confidence that Erasmus+ projects have a huge impact on the professional development of the teaching staff of the Republic of Uzbekistan.

### 3.3.1.3.2. Impact on students

11. How much do you agree with the following statement: Participating in the Erasmus+ project introduces new teaching methods to students?

118 responses




All survey participants strongly agree or inclined to agree that participation in the Erasmus+ programme has enabled the introduction of new teaching methods for

students. None of the respondents indicated their disagreement with this statement, which clearly indicates the significant impact of the Erasmus+ programme on the modernization of student teaching methods.

### 3.2. CBHE projects that impacted science and innovation reforms

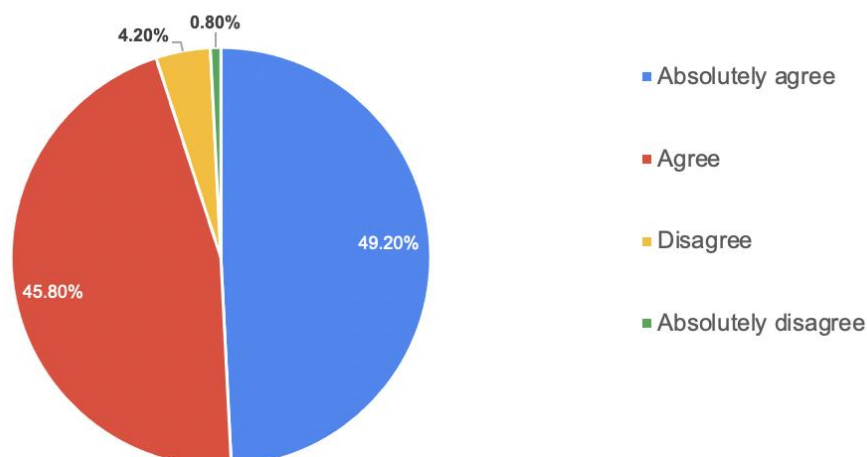
A number of Erasmus+ projects directly affected such an integral element of higher education as scientific research activity. Projects supporting the reform of doctor degree education in the Republic of Uzbekistan have had a particularly serious impact. For example, below is the profile of the CBHE **UZDOC 2.0 project: Improving the quality of doctoral education in higher education institutions in Uzbekistan**, which shows the impact of projects on this area.

<b>Logo of the project</b>	
<b>Title and number of the project</b>	<p align="center"><b>UZ DOC 2.0: Improving the quality of doctoral education in higher educational institutions of Uzbekistan</b> 573703-EP-1-2016-1-BEPPKA 2-CH ESP</p>
<b>Project duration</b>	<p align="center">15/10/2016 - 14/10/2019</p>
<b>Web-site</b>	<p align="center"><a href="http://www.uzdoc.eu/">http://www.uzdoc.eu/</a></p>
<b>Main achieved results</b>	<ol style="list-style-type: none"> <li>1. The project has had a significant impact on building the capacity of participating universities in Uzbekistan to develop and modernize the quality of doctoral education.</li> <li>2. Prepared "Guidelines for the development of doctoral studies in Uzbekistan/ Recommendations for ensuring the quality of doctoral studies in Uzbekistan".</li> <li>3. The doctoral education sector in Uzbekistan is rising to the level of the latest European development trends, combining best practices and methodology, which makes it possible to improve the solution of issues facing the science and economy sectors of Uzbekistan.</li> <li>4. The centers of Doctoral studies at the scientific department are organized in all Uzbek partner universities.</li> </ol>

Moreover, participants of the online survey also noted the impact of Erasmus+ projects on enhancing research capacity in their universities.


20. How much do you agree with the following statement: Participation in the Erasmus+ projects allowed to develop new projects, including scientific projects?

118 responses



95% of survey participants agreed with the statement that Erasmus+ projects had a significant impact on the development of new projects, including research ones, and only 5% of respondents did not agree with this statement.

In this regard, the **MIND: Management - Innovation - Development** project is very interesting, as it was aimed at developing an ecosystem of innovations and entrepreneurship in Uzbek HEIs.

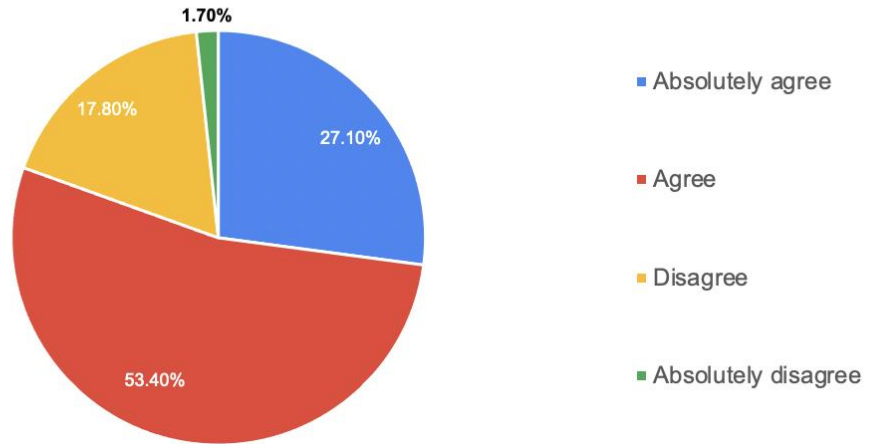
<b>Logo of the project</b>	
<b>Title and number of the project</b>	<b>MIND: Management - Innovation - Development</b> 561539-EPP-1-2015-1-ES-EPPKA2-CBHE-JP
<b>Project duration</b>	15/10/2015 - 14/10/2018
<b>Web-site</b>	<a href="http://mind.ulpgc.es/">http://mind.ulpgc.es/</a>
<b>Main achieved results</b>	<ol style="list-style-type: none"> <li>1. Youth Centers have been created, thanks to which young people who do not have the appropriate knowledge, experience and funds can start their own business or develop a project;</li> <li>2. Within the framework of this Center, young people develop business models and launch their Startups, as well as create non-profit organisations;</li> <li>3. Permanent courses on business and entrepreneurship were organized;</li> </ol>

	4. An online platform has been developed where students post their work and proposals for potential investors or other interested parties.
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In this regard, the issue of establishing new companies, start-ups and additional spin-offs was also clarified during the online survey.

23. Do you agree with the following statement: Participation in the Erasmus+ projects allowed creating new companies, startups and getting additional unplanned results spin-offs?

118 responses



80% of survey participants agreed with the statement about the significant impact of Erasmus+ projects, which made it possible to establish new companies, create start-ups and obtain spin-offs, and about 20% of respondents did not agree with this statement.


Furthermore, another project, **CACTLE: Implementing a Central Asian Center for Teaching, Learning and Entrepreneurship**, was aimed at developing a culture of entrepreneurship among youth in HEIs in Central Asia, including Uzbek HEIs.

<b>Logo of the project</b>	
<b>Title and number of the project</b>	<b>CACTLE: Implementing a Central Asian Centre for Teaching, Learning and Entrepreneurship</b> 561495-EPP-1-2015-1-AT-EPPKA2-CBHE-JP
<b>Project duration</b>	15.10.2015 – 14.10.2018
<b>Main achieved results</b>	Within the framework of the project, the "Implementing a Central Asian Centre for Teaching, Learning and Entrepreneurship - CACTLE" was created, which assists in the development of best practices in this area. The activities of this

	<p>center are carried out in an innovative form - an international virtual network of experts with a sustainable perspective. The activities of the CACTLE Center are dedicated to the following tasks:</p> <ol style="list-style-type: none"> <li>1. Advanced training and certification of university teachers in the field of teaching economics and business for target groups: students, employees of private companies / public institutions and entrepreneurs;</li> <li>2. Providing a catalog of courses and training materials for enterprises / institutions. Establishing links between the university and business and industry, using specific teaching and learning methods;</li> <li>3. Curricula and training materials have been developed for the approved (accredited) optional course “Entrepreneurship and Business Development” in all partner universities.</li> </ol>
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### 3.3 CBHE projects that had an impact on agricultural reforms

In particular, the experience of the **ECAP project: Enhancing Competencies of Central Asian Universities in Agricultural Policy focused on Environmental Protection & Land Management** is very interesting, as it was aimed at improving agricultural policies in Central Asia HEIs with a focus on environmental protection and land management.

<b>Logo of the project</b>	
<b>Title and number of the project</b>	<b>ECAP: Enhancing Competencies of Central Asian Universities in Agricultural Policy focused on Environmental Protection &amp; Land Management</b> 561590-EPP-1-2015-1-SK-EPPKA2-CBHE-JP
<b>Project duration</b>	15/10/2015 - 14/10/2018
<b>Web-site</b>	<a href="http://ecap.uniag.sk/">http://ecap.uniag.sk/</a>
<b>Main achieved results</b>	<ol style="list-style-type: none"> <li>1. Developed innovative curricula in universities in order to improve the quality of education in Central Asia (CA) countries in the field of environmental protection and land management in the context of the new Common Agricultural Policy of the EU (CAP);</li> <li>2. Assistance was provided to increase the awareness of university students on the legal basis of agriculture, taking into account respect for the environment;</li> </ol>

	3. Long-term partnerships have been established with universities in Europe and Central Asia and work continues with colleagues in the field of environmental protection and land use.
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Sustainability was also addressed in the **RENES project: Development of Master Programme in Renewable Energy Sources and Sustainable Environment.**


<b>Logo of the project</b>	
<b>Title and number of the project</b>	<b>RENES: Development of Master Programme in Renewable Energy Sources and Sustainable Environment</b> 574055-EPP-1-2016-1-IT-EPPKA2-CBHE-JP
<b>Project duration</b>	15/10/2016 - 14/10/2019
<b>Web-site</b>	<a href="http://reneseplus.uz/">http://reneseplus.uz/</a>
<b>Main achieved results</b>	<ol style="list-style-type: none"> <li>1. Increasing the potential of 6 universities in Uzbekistan for renewable energy and sustainable environment (RES and SE);</li> <li>2. Developed a new educational master's programme;</li> <li>3. Opened a new master's degree in education on renewable energy sources and sustainable environment in universities of Uzbekistan;</li> <li>4. Laboratories for renewable energy sources have been created in partner universities.</li> </ol>

### 3.4. Erasmus+ CBHE projects that had an impact on health reforms


A number of projects under Tempus and Erasmus+ programmes in Uzbekistan were aimed at improving healthcare system, improving medical education and creating interdisciplinary masters degree courses and new specialties in the field of medicine. In general, healthcare and medicine as topics for CBHE projects in Uzbekistan were on the second place in terms of popularity, and in the framework of six Calls 2015-2020 for Erasmus+ CBHE projects, seven projects related to healthcare and medicine were selected for financing.

For example, Tempus **UZHELTH** project developed sector qualifications frameworks for medicine and public health, including introduction of an interdisciplinary approach to public health research with the participation of specialists from agricultural, veterinary and environmental sectors.

The Erasmus+ **ModeHEd** project was aimed at development and implementation of public health and health science courses in non-medical HEIs.


<b>Logo of the project</b>	
<b>Title and number of the project</b>	<b>ModeHEd: Modernising Health Education in Universities</b> 561857-EPP-1-2015-1-DE-EPPKA2-CBHE-JP
<b>Project duration</b>	15/10/2015 - 14/10/2018
<b>Main achieved results</b>	<ol style="list-style-type: none"> <li>1. Courses in public health sciences have been adapted, modernized and restructured,</li> <li>2. Introduced innovative teaching technologies in the educational process as multimedia and audiovisual components;</li> <li>3. Introduced new curricula at universities;</li> <li>4. Purchased a technical and training equipment.</li> </ol>

The goal of the **SPHERA** project is to build capacity for disaster risk mitigation and improvement of targeted public health systems in project partner countries through the creation of an interdisciplinary master's degree courses in public health area.


<b>Logo of the project</b>	
<b>Title and number of the project</b>	<b>SPHERA: Supporting the Professionalization of Health Engineering studies and Related areas in Asia</b> 573909-EPP-1-2016-1-ES-EPPKA2-CBHE-JP
<b>Project duration</b>	15/10/2016 - 14/10/2019
<b>Web-site</b>	<a href="http://www.spheraproject.net/ru">http://www.spheraproject.net/ru</a>
<b>Main achieved results</b>	<ol style="list-style-type: none"> <li>1. The project has supported capacity building for disaster risk reduction and improved targeted public health.</li> <li>2. Trainings and training seminars were held to prepare a new generation of engineers and technicians who have been able to influence the field of medical technology and the public health system.</li> <li>3. An interdisciplinary programme has been developed at the Master's level in the universities of Uzbekistan according to the Bologna model (an approach based on competence, learning outcomes and compatibility with ECTS).</li> </ol>



The Erasmus+ CBHE **TechReh** project developed and implemented a new master's degree course on computer systems in healthcare, modernized the clinical residency in rehabilitation, and assisted in strengthening research in the field of technology, healthcare and rehabilitation in Uzbekistan.

<b>Logo of the project</b>	
<b>Title and number of the project</b>	<b>TechReh: Technology in Rehabilitation</b> 561621-EPP-1-2015-1-IT-EPPKA2-CBHE-JP
<b>Project duration</b>	15/10/2015 - 14/10/2018
<b>Web-site</b>	<a href="http://www.techreh.uz">www.techreh.uz</a>
<b>Main achieved results</b>	<ol style="list-style-type: none"> <li>1. Creation of a new magistracy "Computer systems in medicine"</li> <li>2. Modernization of the clinical residency "Medical rehabilitation"</li> <li>3. Development of refresher courses on "ICT, medicine and medical rehabilitation"</li> <li>4. Opening of 4 laboratories "Technologies in Medicine"</li> </ol>

The **IHOD** project was targeting public health sector by educating health professionals on new curricula, which means a holistic approach to patient care and public health promotion that serves as a model for other professionals in the sector. The ultimate beneficiaries of the project are patients who benefit from advanced healthcare skills, and government, which can reduce the costs of treating chronic diseases.

<b>Logo of the project</b>	
<b>Title and number of the project</b>	<b>IHOD: Improving Healthcare outcomes in Chronic diseases. Enhancing The curriculum at Masters level</b> 586094-EPP-1-2017-1-EPPKA2-CBHE-JP
<b>Project duration</b>	15.11.2017 - 15.01.2021
<b>Web-site</b>	<a href="https://ihodproject.eu/">https://ihodproject.eu/</a>
<b>Main achieved results</b>	<ol style="list-style-type: none"> <li>1. Developed approaches, requirements and workload for master's programmes in accordance with the ECTS guidelines;</li> <li>2. 12 modules and short courses were developed to improve the qualifications of doctors and medical students;</li> <li>3. Improvement of the qualifications of teachers and students of universities of partners from Uzbekistan was carried out;</li> <li>4. Received equipment for the project for online conferences.</li> </ol>

## **4. Findings, challenges and recommendations**

As a result of the research, a set of findings and recommendations was prepared, both for the development of the future Erasmus programme and for assessing the impact of the Tempus and Erasmus+ projects on the development and modernization of higher education in the Republic of Uzbekistan.

A complete NIS analysis with the discussion lists for interviews, focus groups and on-line survey can be provided upon request to concerned parties in case of an agreement with the Erasmus+ programme, as a copyright holder of NIS.

The findings, challenges and recommendations developed will be presented below according to the study of the impact levels of the programme and projects, broken down into national, institutional and individual levels.

The NIS Research Team comprising staff members of the National Erasmus+ Office and National team of Higher Education Reform Experts thanks all NIS contributors and expresses its sincere appreciation for their commitment to the goals and objectives of the Erasmus+ programme.

### **4.1 Findings and conclusions**

#### **Impact of projects at the national level:**

Most of the NIS respondents noted the systemic impact of the Tempus and Erasmus+ projects on the development and modernization of higher education, especially with regards to internationalization and development of new areas of education. It was noted that the new master's degree programmes (specialties) and improvement of quality of the educational process were the main outcomes of projects at the country level. Moreover, the projects provided some assistance in the development of the national education quality assurance agency (State Inspectorate for Supervision of Education Quality under the Cabinet of Ministers of the Republic of Uzbekistan), whose representatives also participated in several Erasmus+ CBHE projects. Moreover, the system of continuous professional development of management personnel in the MHSSE system was also established and upgraded because of the implementation of Erasmus+ project. The MHSSE initiative to create joint international faculties and master's degree programmes in Uzbekistan was supported by the Tempus and Erasmus+ projects, which served as a foundation for the development of new joint curricula on a bilateral basis with European partners. The internationalization of education has led to the emergence of new HEIs and branches of international universities in a number of regions. Their management teams consist of specialists with positive experience of cooperation with European partners under the Tempus and Erasmus+ projects. For example, experts from Samarkand universities noted the rapid career growth, the emergence of new HEIs and their effective governance as a result of the positive impact of the Tempus and Erasmus+ projects, primarily due to advanced

training and experience gained in the course of their implementation. The acquisition of unique laboratory equipment and establishment of educational laboratories which supported strengthening of research activities was important for the modernization of higher education and strengthening the scientific and innovative potential of Uzbek HEIs.

A significant role was played by the interviewed experts and a number of focus group respondents who had experience of participating in the implementation of Tempus and Erasmus+ projects in the process of developing the new Law on Education and the Law on Innovation. Moreover, the National Development Strategy of the Republic of Uzbekistan for 2017-2021 envisaged harmonization of the higher education system of the Republic of Uzbekistan in accordance with the principles of the 1999 Bologna Declaration. Thus, the basis for the implementation of the credit and module system is the Concept for the Development of Higher Education until 2030. In addition, the experts noted that the development and implementation of the credit system in Uzbekistan was carried out in accordance with the European Credit Transfer and Accumulation System (ECTS).

In general, opinion leaders have a unanimous “red line” with regards to the implementation of the Tempus and Erasmus+ projects. This line leads clearly from the impact of projects on the reform and modernization of the higher education system and capacity building within the Tempus programme. It further continues through introducing and disseminating the results of these changes in the higher education system thanks to the Erasmus+ programme. And then it comes to the point where the impact of projects is expected to increase the innovation rates and competitiveness of the national higher education system with the assistance of the future Erasmus+ programme for 2021-2027.

Moreover, the drastic increase in the number of HEIs in Uzbekistan in 2017-2020, including branches of international universities, and the emergence of a large number of non-state, private universities, also happened due to the trained personnel who took part in Tempus and Erasmus+ projects. However, experts also noted a certain cautiousness of European partners with regards to creating joint universities or branches in Uzbekistan, in contrast to partners from South Korea and the Russian Federation. But in general, the European colleagues are interested in establishment of joint master degree programmes and departments.

Furthermore, according to the latest report of the QS International Ranking Agency in Uzbekistan, four HEIs were included on the regional ranking of universities; two of these HEIs are also "internationalisation spots". This in general had a certain impact on the inclusion of Uzbek HEIs into this ranking. In December 2020, a national initiative was launched to create incubation and acceleration centres for start-ups and innovative enterprises in the HEIs of Uzbekistan. Thus, information and methodological materials

of the UNIWORK and MIND projects served as a basis for development of such centres in the Bukhara State University and the Tashkent State University of Economics. Also, some participants noted the fact that these projects significantly strengthened the innovative and scientific capacity of participating HEIs by significantly strengthening linkages with employers and introducing a culture of student start-ups, which in turn led to the multiplier effect; now virtual departments and start-ups are being created in all universities in Uzbekistan and incubators and accelerators.

Interesting conclusions were obtained in the study on the interaction of Tempus and/or Erasmus+ projects with local and national authorities and administrations. The participants in the study answered this question in different ways, but their answers showed one clear tendency: in the case of the HEIs based in the capital, interaction at the level of the city authorities did not happen or was minimal, but in the case of regional HEIs, the situation changed dramatically, and the interaction between the authorities and universities was more intense, including development of joint initiatives to create innovative clusters, technology parks and agropolises. Examples include establishment of Agropolis and Incubation Center in Bukhara region, and an innovative agricultural cluster in Samarkand. Besides, in the Samarkand region, three new HEIs were created on the basis of one HEI with a clear presence of "places of internationalisation and innovation". Their management teams include specialists with vast experience of participation in the Tempus and Erasmus+ projects, and who confirmed the importance of such experience and the impact of projects during the interviews.

A number of experts and focus group participants noted that the impact of national projects in comparison with regional projects is higher, since the number of Uzbek HEIs was increased several times, and, accordingly, the budget allocated to them was also increased, and their project management was more effective. Moreover, the sustainability of national projects lasts longer and has a deeper impact, including at the institutional and individual level.

### **Project impact at the institutional level:**

The experience related to the impact of projects at the institutional level was very interesting. A number of HEIs have the biggest number of finalised and currently implemented Tempus and Erasmus+ projects. The researchers decided to study this phenomenon more deeply. For a better understanding of the research results, the so-called "internationalization spots" (the places of innovation) were identified and marked in a certain way. As a rule, the internationalization spots consist of a tandem: the international department of the HEI + the department which actively participates in developing project proposals and then in project implementation. We found that it is the active collaboration between the departments of international relations and the

departments of the university, as well as the commitment of the departments to international activities that gives good internationalization outcomes. Unfortunately, not all HEIs had such tandems, and therefore, despite the almost 100% geographical and quantitative coverage of Uzbek HEIs by the programmes, there are some leading institutions that stand out. Both "super coordinators" and opinion leaders noted that "the same faces" participated in a number of projects. Besides, MHSSE representatives stated in the interviews that this phenomenon was still positive and had an impact on capacity building, starting with individual impact and then expanding to the institutional and national levels of project impact, influencing development of a particular area of education.

In the course of the interviews, a number of projects were mentioned, some of which we would like to name. Others will be mentioned further in the report according to their topic. For example, the IMEP project has had a tremendous impact on the development of a continuous professional development system for senior staff in Uzbekistan. Moreover, cooperation under this project was started as early as during Tempus QAPD project implementation. Members of the project team at first created a course on Educational Process Management, and then a new Management in Education specialty. Almost all Erasmus+ CBHE projects in 2015-2017 had an impact on the introduction of the credit system, not only in their own HEIs, but also at the national level. Establishment of unique, modern and innovative laboratories due to the impact of the projects was mentioned by the experts from RENES, ECCUM and TechReh projects.

Moreover, during the COVID-19 pandemic many experts in their interviews noted the importance of experience in telecommunications, video conferencing and webinars under Erasmus+ projects. It was this experience that made it possible for Uzbek HEIs, in general, to painlessly switch to online education due to the experts and members of project teams who acted as methodologists during the transition to distance learning.

Most of the study respondents noted the impact of Tempus projects and an even greater impact of Erasmus+ projects on promoting ideas of innovation, including the importance of the role of HEIs in the process of creating regional innovation clusters and the engagement of entrepreneurs and industry as equal partners in the so-called "innovation triangle", where universities, science, business, manufacturing and the local community are active participants in the development and implementation of innovations. Also, experts noted the fact that visits to European universities and exposure to their industrial parks, clusters, business incubators and start-up accelerators, and in some cases placement in these institutions strengthened the innovative capacity of experts as leading professionals and specialists in their area of expertise.

Half of the interviewed experts and focus group participants noted the significant impact of Tempus and Erasmus+ projects on understanding the role and importance of

employers, industry and civil society for quality and efficiency of higher education. One of the experts even mentioned that he first learned about the "second and third mission of universities" thanks to his participation in the Tempus and Erasmus projects. In Uzbekistan, in general, the understanding of the second and third missions of HEIs remains somewhat fragmentary, and these projects provided an opportunity to obtain practical and theoretical experience in this matter. Because of that, there was a number of projects aimed at strengthening the interaction of HEIs and employers, with industry and partly with civil society participation. Regarding the latter, experts noted the National Committee for Tourism Development, the Farmers Association of Uzbekistan and the Youth Union that later participated in a number of joint projects.

Some of the study participants had experience with both Tempus and CBHE Erasmus+ projects and were able to compare the two programmes. As one respondent put it, "Tempus projects were more generous and flexible." However, all participants agreed that the roles and responsibilities of local partners had become significantly more important under Erasmus+ projects. And a third of the participants mentioned that they initiated their projects themselves and then looked for partners to support the project idea. In general, one thought was common to everyone who had been involved in project activities under the framework of Tempus and Erasmus+ programmes for a long time: Tempus trained teams and HEIs for the implementation of international educational projects with a more active role of European partners, and Erasmus+ made it possible to achieve the goals with more active participation of national HEIs. Interestingly, almost all participants noted that their projects anticipated some government reforms and had a real impact on the modernisation of higher education.

### **Project impact at the individual level:**

During the expert in-depth interviews, we asked a number of questions about the impact of the Tempus and Erasmus+ projects and, in general, about internationalization and its role in improving the professional competencies of experts and their career growth. The answers of the respondents differed somewhat from each other with regards to the acquired international experience and in a number of issues related to the career growth. But in general, most of the experts stated during the interviews that their professional success was to a large degree (about 80%) determined by the opportunities and experience that they gained by participating in the Tempus and Erasmus+ projects. They defined success as the acquisition of flexible skills such as English language proficiency, intercultural communication, project work, teamwork, as well as building their own network of contacts in the scientific and educational areas.

The strongest changes happened in the period 2017-2020, when the international experience of a specialist in a particular field was the most important factor for career growth. Because of this, several experts had undergone serious career changes towards growth and influence in their field of knowledge and education. All interviewed experts

and opinion leaders had experience of participating in Tempus or Erasmus+ projects, and some were participating in Erasmus+ projects during the interview period. A remarkably interesting fact was noted by an expert from the Tashkent branch of the Turin Polytechnic University; 25 former employees constituted the backbone of the newly developed Ministry of Innovations of the Republic of Uzbekistan. All of them had experience of participation in the Tempus and Erasmus+ projects, which definitely helped them in their career growth. Moreover, a number of these specialists also work in the MHSSE system and the State Inspectorate for Supervision of the Quality of Education, which supported the introduction of ECTS in Uzbekistan, given their positive experience in international projects and in the branch of a European university. Some experts also spoke about the risk of a "brain drain" not only in terms of the departure of specialists with international experience of participation in the Tempus and Erasmus+ projects, but also in terms of their transfer to other areas. This issue deserves special attention and additional research.

The main impact of participation in mobility under the international credit mobility projects takes place mainly more at the individual level. It makes participants want to obtain a new master's or PhD degree. All focus group participants noted this and only one of them said that his participation in ICM helped him better understand the essence of ECTS and apply it in his HEI. Basically, this correlates with the fact that the interviewed heads of international relations departments and the vice-rectors for international affairs were able to assess the impact of ICM mostly at the university level.

## **4.2. Challenges**

### **At the national level:**

Opinion leaders from ministries and agencies noted that national priorities for CBHE projects should be updated more often, considering the speed of reform and modernization processes in all areas of the national economy of the Republic of Uzbekistan, when national priorities can change as fast as within one year. In this regard, the experts express the hope that national and regional priorities will be agreed more often than once every 3-4 years or the recent and significant reforms should be taken into account during consultation process on a preliminary short list of selected Erasmus+ CBHE projects.

In general, experts note the absolute absence of corruption both in the former Tempus projects and in the Erasmus+ projects and highly appreciate the fair and transparent project selection process. They also expressed a wish to increase the opportunities for Uzbek HEIs in terms of participation not just in Erasmus + projects, but also in projects such as new EU framework programme "Horizon Europe" from 2021.

Universities of Uzbekistan were able to open treasury accounts for foreign currency which was not possible during the Tempus programme, but became a reality in the

course of the implementation of the Erasmus+ programme. Inter alia, risk of penalties for the consortiums within the Erasmus+ programme forced to reconsider the level of participation and involvement of national teams in the implementation of projects. Because of this, Uzbek partners began to lead project work packages more often, and moreover, one university from Uzbekistan became the grantholder of CBHE project, which happened for the first time.

The next difficulty at the national level was force majeure related to two events: 1) change of the national coordinator due to the transfer to a new job or promotion/dismissal; 2) reorganisation of the university; a change in areas covered or other aspects. That caused certain difficulties, which, in principle, were successfully overcome or plans were developed to address them. Another problem was the lack of influence and lobbying of the project team and the consortium on the sectoral ministries and agencies, and because of that in some cases it was difficult to ensure systemic and national impact of the project, or this impact was delayed.

#### **At the institutional level:**

Several interviewed participants noted the overall difficulty of writing a project proposal, as well as increased administrative requirements for project reporting and monitoring, including the lack of financial and design flexibility in Erasmus+ projects compared to Tempus.

At the institutional level, the participants noted the following challenge: it was difficult for some members of the consortium to explain the essence of the Erasmus+ CBHE projects, especially for representatives of HEIs that did not have any experience in implementing Tempus or Erasmus+ projects. The respondents also noted the fact that some projects were not sufficiently supported by the HEI administration or, on the contrary, the administration “excessively” interfered with the project, often changing coordinators or not letting competent specialists work on the project.

According to some respondents, not all members of the consortium were equally effective in achieving the project outcomes, which applies both to the national partners and European partners. In this regard, there were situations when several partners did all the work on the project, and the rest were not very active. Thus, in case of imposing fines on a project consortium, it is very important to determine how this fine will be collected and ensure a fair assessment of the contribution of each member of the project consortium to the project.

#### **At the individual level:**

In general, the focus group participants did not note any problems at the individual level. Nevertheless, the majority of respondents mentioned organizational and partly financial difficulties in organizing the mobility itself. For instance, they noted problems they faced when applying for a Schengen visa and sometimes for the national visas of



EU member states; some embassies were located in the Russian Federation and the costs of obtaining a visa were not covered by either the project or the HEI; most of the participants experienced organizational and financial difficulties when returning to Uzbekistan during the coronavirus pandemic.

### **4.3. Recommendations**

#### **At the national level:**

1. Support the efforts of project teams on ensuring systemic impact of project outcomes, taking into account national priorities, as well as taking the Development Strategy of the Republic of Uzbekistan until 2030, and, in particular, the Strategy for Uzbekistan to enter the top 50 countries in the Innovation Index until 2030. Specifically, to support the task of enabling at least 10 HEIs to enter international rankings in terms of the quality of education and scientific research.
2. Experts recommend providing more opportunities for autonomy and independence of HEIs in Uzbekistan, which will support an additional breakthrough in the internationalisation of educational processes;
3. Given that the State Inspectorate for Supervision of the Quality of Education under the Cabinet of Ministers of the Republic of Uzbekistan became an observer in ENQA (European Association for Quality Assurance in Higher Education) it is recommended to harmonize national quality indicators with ESG (European Guidelines and Standards for Quality Assurance).
4. Assess the quality of education under joint master's degree courses and departments with European partners in accordance with the ESG guidelines and standards;
5. Oblige the projects to conduct regular dissemination activities and information events promoting the project results with the involvement of the mass media;
6. Recommend choosing equipment purchase for projects with more focus on laboratories;
7. Create a network (association) of Erasmus+ project coordinators and managers to enable regular exchange of practical and theoretical experience;
8. Study ECTS issues taking into account the "learning outcomes" approach, without allowing a formal approach to the usual "recalculation of classroom hours into educational credits";
9. Recognise the importance of students mobility, including national, regional and international mobility, in the development and implementation of a credit and module system;

10. Gradually include other principles of the Bologna Declaration related to academic freedom, social dimensions and quality of education (ESG) into the strategy for the development of higher education.
11. Provide investment guarantees to European partners at the level of the MHSSE and other state bodies in the event of the creation of joint universities or opening of branches of European universities in Uzbekistan;
12. Widely engage new HEIs in international activities through the information days, trainings and workshops on project management and writing project proposals within the framework of the next Call for project proposals within a new Erasmus+ programme;
13. Analyse and apply the experience of project coordinators and managers, as well as project participants in the preparation and discussion of new regulations and development concepts in the field of higher education.
14. Actively promote project outcomes in professional communities, including through digests for ministries and agencies of the Republic of Uzbekistan;
15. Strengthen interaction between universities and local authorities, taking into account the so-called third mission of universities, which is their social mission to support and develop local communities;
16. Take into account the European experience, where universities act as drivers of regional development, due to the involvement of the university expert community;
17. Conduct expert days on a regular basis with the participation of representatives of local authorities;
18. Replicate “best practices” at the national level. As an example, take into account the positive experience of Bukhara and Samarkand HEIs in attracting additional funding for project activities from local and national authorities.
19. Determine national priorities for CBHE projects before each Erasmus+ programme Call, and update/revise regional priorities every three years;
20. Include, if necessary, line ministries in the project selection process, through participating in consultations on a preliminary short list of CBHE projects;
21. Facilitate the process of writing project proposals by excluding and non-duplicating unnecessary information;
22. Reduce the level of administrative requirements and the sophistication of interim and final reports within Erasmus+ projects;
23. Revise the unit costs for travel, taking into account the national and territorial characteristics of Uzbekistan;

24. Strengthen NEO's role in monitoring projects and supporting project teams on various administrative and financial aspects of project management;

**At the institutional level:**

1. Widely disseminate the positive experience of efficient participation in Erasmus+ projects with a deeper study of "internationalisation spots" in a number of Uzbek HEIs, taking into account the institutional monitoring by NEO;
2. Due to the increasing complexity of project management and the requirements of the Erasmus programme for financial and administrative reporting, consider "project office" a positive experience, as it is based on the tandems of departments for international relations and employees of departments and universities, with a clear division of responsibilities related to the administration of the project and its content related implementation;
3. Motivate active departments and faculties with experience in implementing Erasmus+ projects to widely disseminate projects outcomes, as well as provide methodological assistance in writing project proposals;
4. Strengthen the requirement for project teams to focus on purchase of laboratory equipment and new innovative technologies;
5. Create an innovation ecosystem in HEIs at the national level and taking into account the "internationalisation spots", which over time also turned into "innovation spots";
6. Harmonize the innovation ecosystem of Uzbek universities with the best European practices, taking into account the implemented and ongoing Erasmus+ projects;
7. Establish the system of placements in European industrial parks for wide groups of academic/administrative staff and students;
8. Organize joint competitions for student and teacher start-up initiatives.
9. The role of employers and professional organisations, including civil society, in the implementation of the second and third missions of universities should be greatly strengthened;
10. Taking into account the transition to a credit and module system, it is recommended to conduct public consultations with the relevant stakeholders in the field of education;
11. Use experience of European projects (for example, the outcomes of the UZHELTH and NURSLIN projects) for development and approval of the National Qualifications Framework in the field of higher education;
12. Consider the increased role of ICT and digitalization in planning and implementing the goals and objectives of Erasmus+ projects;

13. Provide for the continuity of project coordination and, possibly, create a project office in each HEI to prevent issues related to the replacement of the institutional coordinator and other members of the project team for whatever reason;
14. Strengthen the interaction of the project consortium, in particular structural projects, with the relevant ministries and agencies, with the involvement of NEO;
15. Provide for force majeure situations such as natural disasters and epidemics, with a clear action plan and areas of responsibility of partners in case of the emergency and planned return of students and faculty to their home countries;
16. Work out an agreement on visa expenses and clearly define who bears them in the absence of an embassy or consulate of programme and partner countries in Uzbekistan;
17. Recommend Uzbek HEIs to establish a reserve fund, to cover the costs of the urgent return of mobility participants to Uzbekistan in the event of force majeure situations;
18. Create favourable conditions in the Uzbek HEIs for transparency and intolerance to corruption at all stages of the implementation of mobility projects both within the ICM and CBHE projects;
19. Ensure full recognition of the mobility period abroad in accordance with the rules of the Erasmus+ programme, given the fact that Uzbekistan has also switched to the ECTS.

**At the individual level:**

1. Maintain and enhance the diversity of the programme and widen the opportunities for individual training and individual professional development under Erasmus+ projects;
2. Continue the activities of the National Erasmus+ Office in Uzbekistan to support project implementation and expand the number of their participants through project monitoring;
3. Provide motivation for specialists who have international experience, including through providing new opportunities for professional development and financial incentives at the expense of the HEI and other public stakeholders;
4. Conduct more events to support exchange of professional experience of project participants;
5. Create a network or association of ICM project participants like Erasmus Mundus Alumni network;

6. Conduct an open and fair selection of students and teaching staff to participate in Erasmus+ projects, including credit mobility projects involving as many participants as possible;
7. Support strengthening of women's participation in Erasmus projects through project monitoring, and when selecting participants in mobility projects, recommend giving priority to females, other things being equal;
8. In case of agreement, include representatives of European partner universities in the team for selection for mobility participants;
9. Conduct orientation mobility trainings for selected participants with elements of multiculturalism and understanding of the basics of internationalisation.



## 5.2. List of national priorities of Uzbekistan and respective Erasmus+ CBHE projects` acronyms

### Category 1 – Curriculum Development

- Education (**RUECVET**) Education science,
  - Training for pre-school teachers, Teacher training without subject, Specialisation, Teacher training with subject specialisation
- Social and behavioral science (**TALENT**)
- Biological and related sciences
  - Biology and biochemistry
- Physical sciences
  - Chemistry, Earth science, Physics
- Mathematics and statistics (**ECCUM, ITEM**)
  - Mathematics, Statistics
- Information and Communication Technologies (**INTRAS, CLASS, ELBA**)
  - Computer use, Database and network design and administration, Software and applications development and analysis
- Engineering and engineering trades (**ACADEMICA, FSAMP, RENES, GREB, DSinGIS, MECHAUz, SPACECO**)
  - Chemical engineering and processing, Environmental protection technology, Electricity and energy, Electronics and automation, Mechanics and metal trades, Motor vehicles, ships and aircraft
- Manufacturing and processing
  - Food processing, Materials (wood, paper, plastic, glass), Textiles, clothes, footwear, leather, Mining and extraction
- Architecture and construction (**ERAMCA**)
  - Architecture and town planning, Building and civil engineering
- Agriculture, forestry, fisheries and veterinary (**ECAP, BUZNET, EPCA, TOPAS, NICOPA, AgroDEV, BioEcUz**)
  - Crop and livestock production, Horticulture, Forestry, Fisheries, Veterinary

- Health (**TechReh, MODEHED, SPHERA, IHOD, CHILDCA, HARMONE, FOR21**)
  - Dental studies, Medicine, Nursing and midwifery, Medical diagnostic and treatment technology, Therapy and rehabilitation, Pharmacy, Traditional and complementary medicine and therapy
- Arts - regional priority for Central Asia (**MUSAE**)

**Category 2 - Improving management and operation of Higher Education Institutions:**

- Governance, strategic planning and management of HEIs (**UNICAC, DECIDE**)
  - Such as human resource and financial management, etc.
- Quality assurance processes and mechanisms (**IMEP, IQAT, PAWER**)
  - Such as the development of mechanisms and benchmarks for quality assurance in different segments of HE (academic contents and services)
- Development of research and innovation capacities (**UZDOC 2.0**)
  - Excluding research activities

**Category 3 - Developing the Higher Education sector within society at large:**

- Development of school and vocational education at post-secondary non-tertiary education level (**MAGNET**)
  - Such as reforming in-service training for teachers and reforms to the teaching profession
- Knowledge triangle, innovation
  - Such as reinforcing links between education, research and business
- University-enterprise cooperation (**CACTLE, TRIGGER, REILEAP**)
  - Such as support for students' practical placement, entrepreneurship, employability of graduates, etc.
- New technologies in Higher Education (**MIND, NURSLIN, HIEDTEC**)
  - Support to the modernisation of Higher Education systems through the development of open educational resources, connectivity, the acquisition of digital skills and learning methods and mobilisation of stakeholders including teachers, learners, economic and social partners