I. Overall description
II. Current challenges and needs
   – Trends and challenges
   – The Bologna Process
III. Participation in EU programmes
   – Tempus
   – Erasmus Mundus
IV. Bibliographical references and websites
The higher education system in Turkmenistan

Years
0 1 2 3 4 5
Medical Institute, Art Academy, Conservatoire (Lukmançylyk instituty, Çeperçilik akademiyasy, Konserwatoriýasy)

Diploma of higher education

Years
0 1 2 3
Internship for medical graduates (Lukmançylyk instituty üçin internatura)

Diploma (Diplom)

Postgraduate degree (Yokary okuw mekdebinden sonky bilim)
Doctorate (Doktorantura)

Field of study

>>> Medicine and art

>>> Other fields

ECTS
Credits according to the European Credit Transfer and Accumulation System

<table>
<thead>
<tr>
<th>programme</th>
<th>regulated at national level</th>
<th>decided at institutional level</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>▼</td>
<td>▲</td>
</tr>
<tr>
<td>SOME</td>
<td>◀</td>
<td>◇</td>
</tr>
</tbody>
</table>
I. Overall description

1. Major characteristics of tertiary education in the country

Legislation covering the field of tertiary education

The Law on Education and Law on the Status of Scientists entered into force in August 2009 and aim to radically reform the national system of education and science in Turkmenistan.

The Law on Education regulates social relations in the sphere of education, defines the basic principles of the state education policy, as well as the objectives, tasks and functions of the education system and its management. It also provides a number of innovations. For example, the law authorises the establishment of private educational institutions and educational institutions in other countries in which the primary language of instruction is not Turkmen.

Educational institutions can be set up by state government bodies, local governments, domestic and foreign organisations of all types of ownership, public associations registered in the territory of Turkmenistan, Turkmen citizens and even foreign nationals. However, education institutions carrying out educational programmes for training the staff of military and law enforcement agencies can only be set up by the Cabinet of Ministers of Turkmenistan.

In addition, the law foresees that education can also be provided through self-education, external studies, as well as online learning. Along with full-time study, distance education will be introduced.

The Law on the Status of Scientists defines the rights, duties and responsibilities of researchers, the criteria for evaluation of their qualifications as well as the responsibility of state government bodies to ensure the freedom of academic work, provide social protection for researchers and raise the prestige of scientific activities.

Types of tertiary education programmes and qualifications

University studies consist of five-year programmes except for medicine and some programmes in arts which last for six years. After three years of additional studies, graduates can obtain the degree of 'Candidate of Science', followed by a 'Doctor of Sciences' through supervised research.

Higher education institutions (HEIs) provide higher education in various fields. Higher education is mainly provided by universities, academies, conservatoires and institutes.

Higher education is carried out on the basis of full-time, part-time (evening) and correspondence courses. The fields of study offered are in line with the classification of specialities of higher education of Turkmenistan or are determined by the Cabinet of Ministers of Turkmenistan.

Students are admitted to higher education institutions, followed by two years working experience in the chosen profession. Upon finishing, they receive a recommendation by the employer. After these two years of work experience, the graduates receive a diploma of higher education (specialist degree).

The laws are aimed at improving HE while extending the period of study to five (six) years, decreasing the teaching load from 1 250 to 850 hours, providing a review of curricula and study plans, introducing 33 new disciplines, increasing the annual number of student places and developing postgraduate and study programmes in relevant branches of science.

Types of tertiary education institutions

There are 24 higher education institutions in Turkmenistan: 19 civil and five military HEIs. All HEIs are state-owned: 17 institutes, five universities, an Academy and a Conservatoire. The Branch of Gubkin Russian State University of Oil and Gas was opened in Ashgabat on 1 September 2008. In September 2011, a new institute – the Turkmen State Institute of
Finance – was opened in Ashgabat. In July 2012, the Turkmen Polytechnic Institute was closed and in its place two new institutions were opened – The Turkmen State Institute of Oil and Gas and the Turkmen State Institute of Construction and Architecture.

There is also an Academy of the Civil Service which was established in 2009. This Academy is designed to produce highly-skilled managerial staff and civil servants with the competence and lateral thinking to successfully implement the reforms underway in Turkmenistan.

<table>
<thead>
<tr>
<th>Number of HEI</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
</tr>
<tr>
<td>Civil</td>
</tr>
<tr>
<td>19</td>
</tr>
</tbody>
</table>

2. Distribution of responsibilities

The higher education institutions are governed by the Cabinet of Ministers of Turkmenistan.

The Cabinet is responsible for developing and implementing state policy in the field of education. It ensures compliance with the constitution of Turkmenistan, the legal provisions governing education and international treaties.

It is in charge of the management of the education system and the state budget in the field of education.

In addition, the state body for management of education is responsible for:

- development of models for quality assurance, licensing and accreditation;
- scientific and methodological support for the final certification of graduates on completion of their studies;
- determine requirements for admission to educational institutions;
- issue certificates of activities in education and vocational/professional training;
- development of recognition procedures for co-validation of degrees from foreign countries;
- development of certification procedures and professional development of teaching staff.

3. Governing bodies of the Higher Education Institutions

The direct management of an educational institution is carried out by its head (appointed and dismissed according to the provisions of the laws of Turkmenistan).

The title of the head of an educational institution, the powers and responsibilities of the head and the establishment and responsibilities of the various boards of institutions are defined by the regulations and charters of educational institutions.

4. Financing

The funding of state educational institutions is carried out according to the standards of funding determined for each type of educational institution based on the number of students. The standards for public funding of state educational institutions are set by the Cabinet of Ministers of Turkmenistan.

For educational institutions with lower student populations and for educational institutions in rural areas, the standard funding requirements are taken into account regardless of the number of students.

Non-governmental educational institutions take the standard funding specifications of state educational institutions as a model for their funding activities.

Educational institutions are entitled to conduct business and other income-generating activities in accordance with the legislation of Turkmenistan.
The acquisition of additional funding by an educational institution does not result in the reduction of its funding from the state.

Educational institutions can provide, within the available extra-budgetary resources, social support to students in need.

Educational institutions conduct their financial activities independently and keep their own accounts.

**Fee-based education**

According to the new Law on Education of 2009, state HEIs shall have the right to charge tuition fees from legal and/or physical persons in the following cases:

- a) students whose education is not being funded from the state budget;
- b) students admitted to part-time, evening or correspondence courses;
- c) students admitted to the second cycle of higher education.

State educational institutions, in possession of an appropriate licence, have the right to provide educational services for a fee to the public, enterprises, organisations and other establishments. The income from such activity shall be used by the educational institution in accordance with their charter for authorised purposes.

Fee-paid educational services cannot be rendered in place of educational activity financed by the state budget. However, if this happens, the money earned through such activities shall be paid into the state budget of Turkmenistan.

Non-governmental educational institutions shall charge the students for their services.

The fee based activities of educational institutions are not considered as a business if the income received from them is completely used for the provision of the educational activity (including salaries), its development and improvement.

The relations between non-governmental educational institutions, students and their parents (or substitute persons) are regulated by a contract defining the level of education, term (period) of education, amount of tuition fees, guarantees and responsibilities of the educational institution in cases of suspension or revocation of its licence, refusal of state accreditation of the institution, cessation of activities of the educational institution and so on.

**5. Student contributions and financial support**

Students in educational institutions, established by the laws of Turkmenistan, are provided with scholarships, accommodation in student residences and other measures of social support.

Students in all educational institutions have the right to receive education in accordance with the state educational standards, to obtain additional educational services (including fee-paid) as well as to use textbooks and teaching material in state educational institutions for free.

**6. Licensing, quality assurance and accreditation of institutions and/or programmes**

Educational institutions are established and registered in accordance with the legislation of Turkmenistan. Regulations on the licensing of activities in education and training are approved by the Cabinet of Ministers.

The right to engage in educational activities and provide facilities defined in the legislation, occur from the moment which educational institutions are granted their licences.

The right of educational institutions to issue state qualifications to their graduates and to use the seal of the state emblem of Turkmenistan, arises from the moment of their state accreditation, as certified by the certificate of state accreditation.

The certificate of state accreditation issued to educational institutions (except pre-school centres), confirms their status and their commitment to maintain quality in the preparation of students in line with the state educational standards.
The state accreditation of educational institutions is carried out in the manner prescribed by the Cabinet of Ministers of Turkmenistan.

State control of quality in education is carried out by the bodies of the state administration for education through the final state certification of the graduates directly at the institution, through scheduled and unscheduled inspections of the content and quality of students' performances and in compliance with the implemented educational programmes. The procedure for the certification of educational institutions and inspections has been established by the Cabinet of Ministers.

Educational institutions may be reorganised or wound up in accordance with the laws of Turkmenistan.

7. Admission

Admission to university is decided by a Presidential Decree which determines the number of students to be admitted to each faculty.

Students have to pass three entrance exams and the most successful are admitted on a competitive basis. Entrance exams test the knowledge of general subjects, which includes an interview on the history of Turkmenistan. Tests are done in Russian in writing and interviewing is conducted in Turkmen on the basis of Turkmenistan's secondary school curriculum.

Persons who hold a higher education degree, who have five years of work experience and who have proven themselves capable of doing academic research in a chosen field are eligible for admission on a competitive basis to postgraduate studies. For medical studies, persons who have completed clinical training and who have three years' work experience in medicine, or for those who have not completed clinical training but have five years' work experience in medicine, are eligible for admission to postgraduate studies on a competitive basis.

8. Organisation of the academic year

The Ministry of Education is responsible for determining the length/beginning/end and organisation of the academic year. The academic year starts on 1 September. The first semester lasts for 18 weeks followed by a two-week break. The second semester lasts for 17 weeks. Each semester is followed by a one-month examinations period.

9. Curriculum content

The Ministry of Education sets the curricula of higher education institutions. New textbooks for vocational and higher education institutions have been updated recently.

Particular measures will be taken to improve the following:

- further develop university research;
- strengthen the material and technical base of educational institutions;
- introduce advanced technologies in the educational process;
- widely use scientific and technological advances;
- develop and use new methodologies to compile textbooks and teaching aids.

A number of universities have recently introduced new specialties. For example, the Turkmen State University, named after Magtymguly, introduced Archaeology studies; the Turkmen National Institute of World Languages, named after D. Azadi, introduced Hindi Language studies; the Turkmen State Energy Institute introduced Industrial Electronics studies; and the Turkmen State Institute of Economics and Management introduced State and Local Governance studies.
10. Assessment, progression, certification and degree

The most common forms of student assessments are tests and examinations.

Students must pass the examinations to progress from one year/stage of studies to the next.

Students must pass one compulsory state exam on Ruhnama (in Social Science) and then they can choose to take other state exams or defend a diploma/degree thesis.

On completion of the course of study the students are given Higher Education degrees/diplomas which attest the corresponding qualification.

11. Academic staff

The main categories of academic staff are junior lecturers, lecturers, senior lecturers, heads of department, assistant deans of faculty, deans of faculty, vice-rectors and rectors.

According to the standard provisions of the educational institutions, the persons with relevant pedagogical or vocational education/training have the right to engage in pedagogical activities and be appointed to pedagogical posts.

A state official or a public servant has the right to be engaged in pedagogical activities according to the laws of Turkmenistan.

For the academic staff of the higher educational institutions, the employment contract is concluded for a definite period (normally one year), based on the results of a competition conducted in the manner prescribed by the authorised body of state management of education.

Teaching staff are paid according to their qualifications or degrees and the rate is established by the State, regardless of the field of study.

12. Research activities

The research activities in HEIs are coordinated by the HEIs and the Academy of Sciences of Turkmenistan. The Academy of Sciences is responsible for the organisation of training in postgraduate and doctoral studies. It defines and approves specialities for postgraduate training, establishes postgraduate and doctoral studies at higher education institutions and research institutes, and funds entrance exams from the state budget, etc.

To be admitted to postgraduate studies, students have to pass two entrance exams: one in the speciality (the general course), and another in foreign language (optional). During the postgraduate training the student must pass four exams in: a foreign language (optional), philosophy of science, information and communication technologies, in the chosen speciality (special course), publish at least three articles on the subject of the doctoral dissertation in scientific journals, write a scientific work on the approved subject and to defend it in front of a Special Council. The Council includes doctors of science and candidates of science in the corresponding speciality. The number of members of the Special Council is a minimum of 15 people from different research institutes and higher education institutions, including foreign experts, basically from the CIS countries. After defending a thesis, a postgraduate student receives the Degree of Candidate of Science or Doctor of Science.

13. University-enterprise cooperation

University-enterprise cooperation is realised through the students’ annual work placements.

The syllabus is defined in cooperation with the relevant organisations offering work placements.

After completing the programme the graduate has to work for two years in a relevant enterprise assigned by the university. After that the student receives a Degree/Diploma.

Within the Tempus programme various projects have helped to create a bridge between the academic and professional communities. As an example, in the
framework of the Tempus project ‘Solar Cell Technology Courses for VET and Industry in Turkmenistan’ the Science-Production Association ‘GUN’ of the Ministry of Energy and Production of Turkmenistan worked closely with two Turkmen partner universities on the development of an educational platform and implementation of practical experience in ICT-supported teaching. Pilot teaching in the area of renewable energies and solar cell technology was implemented and followed by subsequent large-scale teaching, dissemination and networking. Due to this cooperation in the Turkmen State Institute of Transport and Communication, the Solar Pavilion was constructed and the Solar panels with measuring equipment were installed. The project was completed in February 2012.

Through the Tempus project ‘Online Learning and Resource Training’ (2006), online sources were created for teaching English to the students of the Aviation and Maritime Departments of the Turkmen Institute of Transport and Communication. The Turkmen World Languages Institute, Turkmen State Institute of Transport and Communication worked closely in the creation of online materials with the Agency ‘Turkmenistan Airlines’ and International Sea Port in Turkmenbashy city. The working group published two textbooks, entitled ‘Hot Air’ and ‘Deep Waters’.

As a result of the project ‘Euro-Turkmen Centre of additional education for inter-branch Professional Qualifications in the Oil and Gas sector’ (2005), the ‘Europäisch-Turkmenisches Weiterbildungszentrum für fachübergreifende Berufskräftigierung im Gas- und Erdölsektor’ (ETWZ) Centre was set up to provide retraining and training of the staff of Turkmen Oil and Gas industry enterprises (Turkmen State Associations such as Turkmenagas, Turkmenoil, and Turkmengeo) in the following training modules transport and logistics, economy and management, specialised language training, and information technologies.

14. International cooperation

International cooperation is actively developing in the field of education. Many Turkmen students are studying at prestigious universities worldwide. The most popular universities for Turkmen students are - Russian, Ukrainian, Belarusian, Malaysian, Turkish, Chinese, European and American Universities.

There are a number of foreign students (from China, Turkey, Iran, Afghanistan, Ukraine and Russia) studying in the HEIs of Turkmenistan.

Most of the Turkmen higher education institutions are involved in Tempus and Erasmus Mundus Programmes.

Since October 2008, an interactive multimedia learning centre set up by the US Agency for International Development (USAID) and International Research and Exchange Board (IREX) at Magtymguly Institute of Language and Literature of the Academy of Sciences of Turkmenistan has been operating. The centre provides support services to research fellows of the Academy of Sciences, postgraduate students and teaching staff of higher education institutions.

USAID has been active in Turkmenistan for more than 17 years. It operates in Turkmenistan on the basis of bilateral cooperation. The long standing relationship has given rise to a number of joint projects in the fields of education, economic development, healthcare, law and the social sector.

There is cooperation with other international organisations such as UNDP, German Academic Exchange Service (DAAD), GIZ, Erasmus Mundus, Tempus, the Asian Development Bank, American Councils, IREX, Foreign Embassies in Turkmenistan, JICA, all of which support the development of the Turkmenistan education system.

The EU project ‘CAREN’ has been operating since June 2010 on the basis of the Virtual Silk Highway Programme (http://www.silkproject.org/) that was sponsored by the NATO Science Programme and other sponsors in Turkmenistan. The Turkmen Research Educational Network Association (TuRENA) has been operating successfully for several years in Turkmenistan.
II. Current challenges and needs

1. Trends and challenges

In Turkmenistan, alongside ongoing socio-economic transformation, reforms in education and science are also underway. One of the primary objectives, underpinning the development of Turkmenistan, is to improve the system of education and increase the qualifications and profile of scientific personnel.

The Government of Turkmenistan pays special attention to the development of international cooperation. Currently, young Turkmens have an opportunity to study and receive professional education which meets international standards. The Government encourages the development of cooperation with the education and scientific centres of different countries, as well as joint research and information exchange.

Since 2008, state-supported scientific projects are being implemented on a competitive basis allowing Turkmen scientists to conduct research activities aimed at addressing important issues of social and economic development and to develop and introduce advanced technologies in industry. There is commitment to further advances, such as the implementation of comprehensive plans aimed at raising the national education system to a new qualitative level in compliance with existing international standards.

The education system in Turkmenistan actively integrates information technologies and distant learning is therefore currently undergoing significant developments.

In addition, new information technologies provide support and an excellent platform for the future of science and education in the country.

The widespread implementation of multimedia and interactive methods in Turkmen educational institutions is one of the challenges of the Turkmen educational policy.

Last but not least, foreign languages are another priority of the state education policy.
2. The Bologna Process

**General Information**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bologna Process officially embedded in the education system</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Bologna Process being implemented by ad hoc groups under the supervision of the Ministry of Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>No particular mechanism supporting the implementation of the Bologna Process</td>
<td></td>
</tr>
</tbody>
</table>

**Bologna cycle structure**

| Level of implementation of a three-cycle structure compliant with the Bologna Process | No three-cycle structure |

**Student workload/duration for the most common Bologna programmes**

| Bachelor programmes | No three-cycle structure | Master programmes | No three-cycle structure |

| Bachelor/Master cycle structure models most commonly implemented | No three-cycle structure |

**European Credit Transfer and Accumulation System (ECTS)**

<table>
<thead>
<tr>
<th>Definition of the Learning Outcomes Concept</th>
<th>No definition of learning outcomes at national level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of implementation of ECTS</td>
<td>No credit system</td>
</tr>
<tr>
<td>Indicative number of hours of student workload corresponding to one</td>
<td>No credit system</td>
</tr>
</tbody>
</table>

---

**ECTS**

---

**Bologna Diploma Supplement (DS)**

<table>
<thead>
<tr>
<th>Level of implementation of the Bologna Diploma Supplement</th>
<th>Another type of Diploma Supplement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma Supplement issued</td>
<td>Another type of Diploma Supplement</td>
</tr>
</tbody>
</table>

---

**National Qualifications Framework (NQF)**

<table>
<thead>
<tr>
<th>Stage towards establishing a National Qualification Framework</th>
<th>Not yet started formally/not foreseen.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1: Decision taken. Process just started.</td>
<td></td>
</tr>
<tr>
<td>Step 2: The purpose of the NQF has been agreed and the process is under way including discussions and consultations. Various committees have been established.</td>
<td></td>
</tr>
<tr>
<td>Step 3: The NQF has been adopted formally and the implementation has started.</td>
<td></td>
</tr>
<tr>
<td>Step 4: Redesigning the study programmes is ongoing and the process is close to completion.</td>
<td></td>
</tr>
<tr>
<td>Step 5: Overall process fully completed including self-certified compatibility with the Framework for qualifications of the European Higher Education Area.</td>
<td></td>
</tr>
</tbody>
</table>

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**Quality Assurance Practices**

<table>
<thead>
<tr>
<th>National Quality Assurance body</th>
<th>Ministry of Education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>A Government-dependent body or Ministry has responsibility for quality assurance.</td>
</tr>
<tr>
<td><strong>Year of establishment</strong></td>
<td>1991</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Involvement in external quality assurance process</th>
<th>Decision-making role</th>
<th>Participation</th>
<th>No participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic staff</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>International Experts</td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
Recognition of foreign qualifications

<table>
<thead>
<tr>
<th>Ratification of the Lisbon Recognition Convention</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognition of Foreign Qualifications for academic study</td>
<td>Recognition for academic study by central or regional governmental authorities</td>
</tr>
<tr>
<td>Recognition of Foreign Qualifications for professional employment</td>
<td>Recognition for professional employment by central or regional governmental authorities</td>
</tr>
</tbody>
</table>

Joint Degrees

| Establishment of joint degrees and programmes in higher education legislation | Joint programmes and joint degrees are not mentioned in the higher education legislation whatsoever. |
III. Participation in EU programmes

1. Tempus

Turkmenistan has participated in the Tempus programme since 1997.

1.1 Statistics

Number of projects in which one or several institutions in the country have been involved (as coordinator, contractor or partner)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint Projects</td>
<td>1</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>Compact projects</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Structural &amp; Complementary Measures (Tempus III)</td>
<td>0</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Structural Measures (Tempus IV)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>22</td>
<td>1</td>
</tr>
</tbody>
</table>

Higher education institutions with highest TEMPUS participation during TEMPUS IV (2008 - 2012)

<table>
<thead>
<tr>
<th>Institutions</th>
<th>Total</th>
<th>Number of projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>TURKMEN NATIONAL INSTITUTE OF WORLD LANGUAGES NAMED AFTER D. AZADI (ASHGABAT)</td>
<td>3</td>
<td>2  1</td>
</tr>
<tr>
<td>TURKMEN AGRICULTURAL UNIVERSITY NAMED AFTER S.A. NIYAZOV (ASHGABAT)</td>
<td>3</td>
<td>2  1</td>
</tr>
<tr>
<td>TURKMEN STATE PEDAGOGICAL INSTITUTE NAMED AFTER S. SEYDI (TURKMENABAT)</td>
<td>3</td>
<td>1  2</td>
</tr>
<tr>
<td>TURKMEN POLYTECNIC INSTITUTE (ASHGABAT)</td>
<td>3</td>
<td>1  2</td>
</tr>
<tr>
<td>TURKMEN STATE INSTITUTE OF TRANSPORT AND COMMUNICATION (ASHGABAT)</td>
<td>2</td>
<td>2  0</td>
</tr>
<tr>
<td>STATE POWER-ENGINEERING INSTITUTE OF TURKMENISTAN</td>
<td>2</td>
<td>2  0</td>
</tr>
<tr>
<td>TURKMEN STATE MEDICAL UNIVERSITY (ASHGABAT)</td>
<td>2</td>
<td>1  1</td>
</tr>
<tr>
<td>INTERNATIONAL TURKMEN-TURKISH UNIVERSITY (ASHGABAT)</td>
<td>2</td>
<td>1  1</td>
</tr>
<tr>
<td>TURKMEN STATE UNIVERSITY OF CULTURE</td>
<td>2</td>
<td>1  1</td>
</tr>
</tbody>
</table>
1.2 Impact of the Tempus programme

Tempus has been effective in promoting international academic cooperation between Turkmen and EU universities.

The Tempus programme is the only international programme in Turkmenistan that is fully involved in the teaching process on different levels.

While it has been a priority to meet the specific aims of each project, it can be said that the wider objectives of the Tempus programme in fostering professional, academic and human networks are also very significant.

The Tempus programme is well-recognised by the Turkmen universities and authorities. The Turkmen HEIs have been engaged in Tempus projects since 1997 and the programme’s principles are still relevant and in great demand in Turkmenistan.

The programme has been instrumental in motivating staff and introducing new ways of teaching/learning. For example, the experience of the project ‘Innovative education for sustainable agro-industrial and rural development in Turkmenistan’ (2005), clearly showed excellent opportunities for teaching and using modern optical microscopy. The most important areas of implementation are in: veterinary sciences, veterinary control and sanitary control of water, air and soil, technologies for processing vegetable as well as milk and meat products. A modern educational microscopic laboratory purchased by the project for the Turkmen Agricultural University is a solid base for future significant improvements. The project experience and willingness to share knowledge, as well as the enthusiasm and energy of Turkmen colleagues all support the potential of achieving better results in the reform of veterinary education in Turkmenistan.

Academic staff participating in international mobility programmes have upgraded both their teaching and foreign language skills. The programmes are an important instrument for motivating university staff and opening new horizons for them. The close co-operation of the Dovletmammed Azadi Turkmen National Institute of World Languages with its European partners and its numerous exchanges with the universities of the partner countries (Great Britain, Spain and France) within the Tempus project ‘Study of European Languages’ (1999), have resulted in improvements of the following: in the methods of teaching foreign languages, translation and interpretation, the opening of a simultaneous interpretation laboratory, and setting up of the Translation Centre and library of literature on new methodologies and translation with audio and visual aids.

Thanks to Tempus, a significant number of East-West and West-East exchange opportunities took place, providing participants from both sides to take time out from their normal duties to reflect on and discuss the shared problems of all language teachers in higher education. Tempus is always to be seen as a mutually-enriching joint endeavour rather than a one-way exchange.

Now that all Turkmen institutions of higher education provide English language training to all students, there is a debate over the most appropriate methods for training students of technical disciplines in language skills.

Within the framework of the project ‘Inter-University Knowledge Management’ (2005), the professors of Magtymguly Turkmen State University and Turkmen State Institute of Economy and Management in co-operation with the professors of the Catalonia Polytechnic University in Barcelona, Spain, have participated in compiling an English-Russian-Turkmen and Turkmen-Russian-English on-line dictionary. This dictionary includes more than 3 000 words used in economics and finance. The online dictionary is already on the Internet.

Tempus has contributed to the modernisation of curricula through the development of new courses and teaching materials.

The professional horizons were extended to a significant degree by discussing education in the field of tourism providing links between them. They provided the teaching staff with an enormous amount of factual material which can be used for teaching and academic research later on. Firstly, the collaboration under the aegis of this programme helped to broaden the range of subjects covered in Turkmen education programmes on tourism which was then a new subject area in higher
education. Secondly, it led to the introduction of new teaching methods. Thirdly, it made possible study visits for students and teachers which enhanced their knowledge of international practices in the fields of tourism.

Joint cooperation of European and Turkmen partners demonstrated the benefits of future tourism development and awareness of ecological and cultural principles.

Modernisation of the curricula also underpinned agricultural subjects. For example, during the project on 'Development of Agricultural Education in Turkmenistan in cooperation with European Universities' (2004), the curricula was reformed and training was held at the faculty of Agricultural Mechanisation of the Turkmen Agricultural University. The Educational Innovation Centre was created for educational innovations.

The Turkmen partners developed and published 15 textbooks in Turkmen language on the new and revised courses. The university network was created. Teaching skills and institutional competences have undergone deep changes. 64 teachers from the Agricultural University received different types of training.

Tempus has had a significant impact on the modernisation of universities and on capacity building.

One of the successful projects in this area was a Tempus project on 'Turkmen Economy Training Centre' (2002). The Turkmen Economy Training Centre was established to train managers and staff members of the Institutions. The centre was provided with a computer and lecture rooms with supporting equipment and infrastructures as well as internet connections. In the framework of the Tempus project, the training courses on economic topics such as International Accounting Standards, Internal/External Audit, Fiscal Policy and Taxation, Monetary Policy and Budgeting, Business Management were developed. The courses were delivered by the Turkmen Institute of the National Economy for the different staff of the Turkmen ministries.

One of the projects under the University Management was the 'Modernisation of the Turkmen State University Library' (2001). It resulted in the installation of a computing system for documentary management and the development of an electronic catalogue (more than 14 000 records). To support this process, the project provided the library with modern and high performance equipment. The project addressed as well the development of electronic information through setting up a website giving access to a large scope of internet scientific resources. The Centre for Training and Promotion of Scientific and Technical Information was established with the aim of training and increasing awareness among students, teachers, researchers and librarians about the use of electronic information.

The Tempus Programme is useful not only for Turkmen HEIs which are involved in these educational contacts with European universities but also for their European partners. Creative professional contacts introduce new themes and teaching methods into the learning process. One example is the Tempus project 'Development of International Relations Related to the Needs of the Higher Educational System of Turkmenistan'. The topic of the project is new for the Turkmen Universities. The positive aspects of systemic internationalisation of Turkmen HEIs will be analysed as well as the impact on teaching and learning and on research and innovation. Furthermore, the project is creating the administrative structures responsible for internationalisation (i.e. the International Relations Offices) within four Turkmen universities that deal with internationalisation in a professional way in Western Europe. It will transfer the necessary know-how by providing extensive training for its future staff. It is planned to draw up national recommendations in conjunction with each Turkmen partner university that will raise the educational standards.
2. Erasmus Mundus

The objective of the Erasmus Mundus programme's is to promote European higher education, to help improve and enhance the career prospects of students and to promote intercultural understanding through cooperation with third countries, in accordance with EU external policy objectives in order to contribute to the sustainable development of third countries in the field of higher education. It does this through three Actions:

**Action 1 – Erasmus Mundus Joint Programmes (Master Courses and Joint Doctorates) - with scholarships**

Erasmus Mundus Joint Programmes are operated by consortia of higher education institutions (HEIs) from the EU and (since 2009) elsewhere in the world. They provide an integrated course and joint or multiple diplomas following study or research at two or more HEIs. Master Courses and Joint Doctorates are selected each year following a Call for Proposals. There are currently 131 Masters and 34 Doctorates offering EU-funded scholarships or fellowships to students and scholars.

**Action 2 – Erasmus Mundus Partnerships (former External Cooperation Window) – with scholarships**

Under Action 2, Erasmus Mundus Partnerships bring together HEIs from Europe on the one hand and those from a particular region, or geographical ‘lot’ on the other. Together the partnerships manage mobility flows between the two regions for a range of academic levels – Bachelor, Master, doctorate, post-doctorate and for academic staff.

**Action 3 – Erasmus Mundus Attractiveness projects**

This Action of the Programme funds projects to enhance the attractiveness, profile, image and visibility of European higher education worldwide. Action 3 provides support to activities related to the international dimension of all aspects of higher education, such as promotion, accessibility, quality assurance, credit recognition, mutual recognition of qualifications, curriculum development and mobility.

More information:

Number of students/staff participating in the programme

**Erasmus Mundus – Joint degrees (Action 1)**

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<thead>
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*Nationals of the country participated in the programme for the first time in 2005-2006 (students) and in 2008-2009 (academic staff).*
Erasmus Mundus– Partnerships (External Cooperation Window, Action 2)

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<th>Year</th>
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<th>Post-doctorate</th>
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<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
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<td>8</td>
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Institutions participating in the programme up to and including 2011

<table>
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<tr>
<th>Institutions</th>
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<th>Action 2 Partnerships</th>
<th>Action 3 Attractiveness projects</th>
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IV. Bibliographical references and websites

- Abstracts of reports of the International Conference ‘Science and Education of the new revival epoch in the global science and education system’ (September 9-11, 2009)
This document has been produced by the Education, Audiovisual and Culture Executive Agency (EACEA) on the basis of contributions from the Tempus Office and the authorities of the country concerned.

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This document reflects the views of the Tempus Office. The European Commission cannot be held responsible for any use which may be made of the information contained therein.

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