

Assessment Mission Report

State Forensic Centre under the Ministry of Justice of the Kyrgyz Republic



Assessment Report

This publication contains the findings and recommendations of the assessment mission on forensic services in the Kyrgyz Republic undertaken within the forensic component of UNODC Criminal Justice Programme in the Kyrgyz Republic (KGZT90). This programme is implemented by UNODC with generous support of the Government of the United States of America, U.S. Department of State, Bureau of International Narcotics and Law Enforcement.

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Assessment Mission Report
State Forensic Centre
under the Ministry of Justice of the Kyrgyz Republic

Bishkek, Kyrgyz Republic
11-15 August 2014

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Abbreviations

The following abbreviations have been used in this report:

| | |
|--------------|---|
| SFC | State Forensic Centre under the Ministry of Justice of Kyrgyzstan |
| SOP | Standard operating procedures |
| UNODC | United Nations Office on Drugs and Crime |

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1. INTRODUCTION

Forensic services are key to an effective and fair criminal justice system because they provide objective and timely information for multiple phases at different stages of the criminal justice process. For example, forensic services are used by police to identify suspects in the investigative phase of the criminal justice process. Forensic services are also used by attorneys and judges during the trial phase of the process. The ultimate objective of forensic science is to contribute to finding the truth, more precisely to provide the criminal justice system with answers, using objective evidence, and by questions aimed at determining the guilt or innocence of an offender. It is therefore essential that forensic services are provided by a highly qualified and impartial entity.

The assessment of the State Forensic Centre under the Ministry of Justice of the Kyrgyz Republic (herewith SFC) was conducted from 10 to 15 August 2014 by a group of experts from the National Forensic Bureau of Georgia (NFB) – Dr. Paata Tushurashvili, Head of Chemistry and Narcology Department, Mr. Ucha Margvelashvili, Head of Quality Assurance Unit and Mr. Levan Simonishvili Deputy Head of Forensic Criminalistics Department. This mission was designed to assess the current situation and to gather specific information required to make recommendations on the implementation of UNODC Criminal Justice Programme in the Kyrgyz Republic (KGZT90).

The forensic component of this programme provides assistance to the Kyrgyz Republic in establishing a foundation for the sustainable management of forensic services. It is implemented by UNODC with generous support of the U.S. Government, Bureau of International Narcotics and Law Enforcement Affairs.

Outcome 4: The State Forensic Centre under the Ministry of Justice improves the provision of forensic services in line with international standards.

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In addition, this mission also seeks to understand and identify real needs of the State Forensic Centre. This document is a comprehensive report assessing the provision of forensic services and infrastructure of the SFC.

The assessment would not have been possible without the support of the Government of the Kyrgyz Republic. Assessment team reiterates its appreciation and gratitude to the State Forensic Service under the Ministry of Justice of the Kyrgyz Republic, with special thanks to Ms. Tolkun Bekbulatova, Director of the SFC for her support in conducting the assessment.

2. METHODOLOGY

The methodology used during this mission includes:

- Desk review of legislative framework on provision of forensic services in the Kyrgyz Republic;
- Visits to laboratories of the SFC in Bishkek, Kyrgyzstan;
- Interviews with staff and heads of laboratories with a particular focus on forensic criminalistics, chemistry and toxicology examination;
- Meetings with senior officials/management of the Ministry of Justice and SFC;
- Meetings with representative of other forensic laboratories of the Ministry of Interior, State Service for Drug Control, others).

UNODC Criminal Justice Assessment Toolkit (Tool on 'Forensic Services and Infrastructure), recommendations on Staff Skills Requirements and Equipment for Forensic Science Laboratories, and other relevant UNODC publications were used by the assessment team as methodological and analytical tools to guide the assessment process.

3. OVERVIEW OF FORENSIC SERVICES AND INFRASTRUCTURE

3.1. Provision of forensic services

The State Forensics Centre (SFC) is a specialized state forensic institution under the direct supervision of the Ministry of Justice of the Kyrgyz Republic. SFC conducts forensic investigations and research on the basis of special knowledge on the instructions of the judiciary and law enforcement agencies.

Until recently, the work of the State Forensic Service was regulated only by a Statute approved by the Government in 1999. Since 2013, the legal basis has been strengthened with the adoption of a new Statute in October 2013¹, and adoption of a new Law on Forensic Services². The new law defines guiding principles for forensic services, basic rights and responsibilities of forensic experts, and basic rules for the provision of forensic services in court proceedings. The performance of forensic examinations in the SFC is regulated by the Government Resolution #648 endorsed on 25 September 2012.

The main objective of the SFC is to conduct forensic, engineering, and economic expertise on the official request of the law enforcement bodies and judiciary for consideration of criminal and civil cases. The structure and staffing of the FSC is approved by the Ministry of Justice of the Kyrgyz Republic.

The SFC is managed by a Director and two deputies who nominally have their own field of supervision. One deputy is in charge of various types of forensic examinations, whilst the other is responsible for the scientific research. According to the national legislation Director of the SFC is appointed by the Prime Minister of the Kyrgyz Republic on the proposal of the Minister of Justice of the Kyrgyz Republic.

¹ Statute of the State Forensics Centre under the Ministry of Justice of the Kyrgyz Republic endorsed by the Government Resolution #577 as of 22 October 2013.

² Law of the Kyrgyz Republic “On Forensic Services”, as of 24 June 2013, #100

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The SFC provides its services free of charge to the budgetary organizations, law enforcement bodies and judiciary. However, it can also provide forensic services to individuals/organizations on commercial basis. For such services the SFC charges fees approved by the Government of the Kyrgyz Republic. Funds received from the commercial activities are accumulated on a special bank account. Due to their small amount, these funds are mainly designated to purchase office inventory.

There are four different agencies in the Kyrgyz Republic empowered to provide forensic services and in particular drug analysis. These are the State Service for Drug Control, the State Forensic Centre under the Ministry of Justice, Republican Bureau of Forensic Medical Examination under the Ministry of Healthcare and the Criminological Centre under the Ministry of Interior of the Kyrgyz Republic. In terms of the forensic services, the State Forensic Centre offers services in most disciplines of forensic science and consequently handles around 90% of the country's forensic cases.

The services offered by the SFC encompass a wide range of disciplines such as seized materials, firearms and ammunition, fire and explosives, trace evidence, forensic accounting, soil, alcohols, oil and paint analysis, construction assessment and others. The type of services to be provided continues to be expanded with the linguistic study of documents, audio/video materials and internet resources having recently been added to the list. The SFC also provides services to confirm the analysis done by other agencies.

Main SFC Office is located in Bishkek and there are two other branches in Osh and Balykchy. The SFC employs a total of 128 staff, of which 94 (73,45) are specialists and the rest support staff (26,5%). The operations of the SFC are funded from the state budget. However, for the last decade budget allocations were limited and SFC could not improve working conditions, procure required equipment and organize proper training and re-training of staff. In 2014 the SFC requested 34,7 million som (approximately \$620,000), however, it received only 61% of the requested amount. There is no training centre for forensic experts at the State Forensic Service. Training curricula and materials for on the job training are also lacking.

3.2. Facilities

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The building, which houses the SFC was built in 1940, since 1963 it is used as an administrative building of the SFC. The useful area is 338 sq.m. This building is unsuitable for forensic examinations and does not comply with elementary safety norms. Most of the rooms are small accommodating 3-4 officers. Though basic computers are available, other basic furniture such as tables, chairs and fixtures are very old and worn out. Equipment for analysis of drugs is cramped into two small rooms. A sample preparation room, analytical balance room and ballistics room for the testing of firearms are located in a poorly lit area in the basement.

Power supply is intermittent in winter and an old homemade power generator is used when power shortages occur. This does not provide a very conducive environment for forensic analysis, which requires a clean and brightly lit work space for accurate and uncontaminated examination.

The electric power supply system within the building is outdated and unable to cope with the existing work load causing regular blackouts. This issue is critical, because some of the modern equipment requires a permanent power supply and a sudden shutdown may cause permanent damage to the equipment. The existing building of the SFC is not equipped with a ventilation and air-conditioning system, neither with centralized nor with split units.

Laboratories are located on different floors, including in a basement without any appropriate health and safety conditions. The walls, floors and ceilings are made of easily inflammable material, which is a critical safety issue. In addition, the laboratories are not provided with individual water taps and safety showers.

To address this situation, in 2010 the Government of the Kyrgyz Republic designated a new plot of land³ and a half constructed building as new premises for the agency. This site is located at the following address: Kyrgyzstan, Bishkek. 11 Orozbekova Str. However, no funding was allocated to finalize the construction of the building. Please see annex 2 for photos of unfinished building of the SFC.

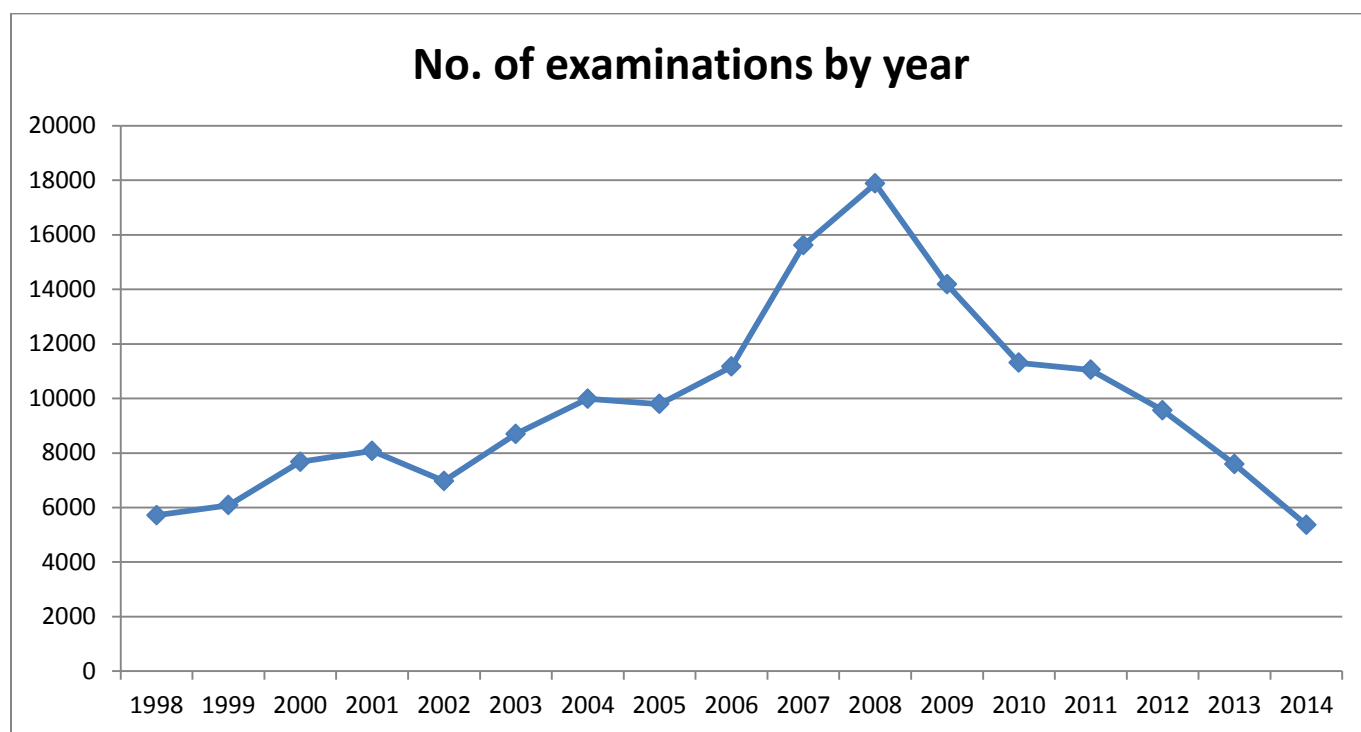
³ Government Resolution №107 as of 01.07.2010

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In the framework of the UNODC assistance the building assigned by the Government to house the SFC will be refurbished and equipped so as to facilitate the agency's move from its old laboratory to the new premises. It is expected to finalize refurbishment works by early 2016.

3.3. Case Management and Evidence Handling

The number of examinations completed by the SFC from 1998 to September 2014 is as follows:



| Year | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|--------------------|------|------|-------|-------|-------|-------|-------|-------|------|------|-------------------|
| No of examinations | 9988 | 9793 | 11167 | 15610 | 17876 | 14181 | 11306 | 11047 | 9565 | 7585 | 5361 for 9 months |

Though the Government Instruction on performance of the forensic examinations #648 (as of 25 September 2012) provides clear rules and procedures on the provision of forensic services, there is no centralized system in the SFC to ensure proper case management and safe

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chain of custody of the submitted evidence from the time of case submission until final return of the evidence to the customer. According to the current practice an investigator or any other customer easily enters the office of the respective section head of the SFC, submits official request for examination along with exhibit(s) and leaves the office of the head of the section without registering of submitted case and evidence. Later head of the section forwards request for examination to the Director of the SFC for further authorization and finally registers case himself/herself at the chancellery without submitted evidence. The head of the section stores submitted evidence at his/her office without assigning to it a unique identification number by the chancellery. This practice should be stopped and clear standard operating procedures for the submission of evidence developed and endorsed.

The SFC does not have a general evidence storage facility with appropriate conditions to safely store submitted evidence. Sometimes due to its big size, some of the exhibits are stored in the yard of the SFC without any proper packaging, thus violating evidence security procedures. To avoid such practice in future it is recommended to develop and endorse specific SOP for the evidence storage.

Though Instruction # 648 contains provisions that oblige the SFC to complete the examination and issue final report within maximum 2 months the reality is very different. The SFC does not have effective policy or procedures to control assigned cases and ensure timely completion of forensic examinations. As a result the majority of backlogs happen with the engineering and economic examinations. For instance, one has to wait in queue about 2 years for the engineering and 1,5 years for the economic examinations to be launched by the SFC.

Measures to ensure the quality of work, such as documented methods, standard operating procedures (SOPs), document validation and checks, are lacking. In 2014 the laboratory for the first time participated in external proficiency tests. The SFC hopes to improve on this and start necessary preparations for achieving accreditation under ISO 17025 in future.

3.4. Personnel

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The SFC employs a total of 128 staff, of which 94 (73,5%) are specialists and the rest support staff (26,5%). The SFC's human resources policies, including the selection and appointment of new personnel, are managed by the Ministry of Justice. As the curator of the SFC, the Deputy Minister of Justice is personally involved in the selection of new SFC employees and interns. The Deputy Minister reportedly makes decisions on recruitment without consulting the SFC's management.

The main condition for the selection of staff is good knowledge of national legislation. Little attention is paid to specific expertise, work experience and other important skills and qualifications of the candidate. Senior SFC staff is not involved in the selection process. As a result new staff do not have clear understanding of assigned duties and lack the necessary knowledge and skills to conduct forensic examinations. They often leave the job after a short period.

4. FORENSIC SECTIONS – KEY OBSERVATIONS

4.1. Substances, Materials and Products Examination Section

This section plays a central role in the operation of the SFC. Experts of this section work on their own cases and support the cases of other sections.

The section's laboratories are located on several floors of the building. The so called wet-chemistry part, which is mainly used for the examination of alcoholic beverages (determination of the content of alcohol) and thin layer chromatography, is located in the basement. Without proper lighting and temperature control, working conditions are inappropriate for forensic examinations. This laboratory is overloaded.

The first floor of the building is dedicated to instrumental chemistry and has rooms for balances, an instrumental chemistry laboratory, a microscopy laboratory and office space for the experts.

The instrumental chemistry laboratory contains GC-MS, LC, and FT-IR microscope-spectrometer. The current location of the equipment is not acceptable, because FT-IR micro-

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spectrometer requires a dry environment and chromatographs increase the level of humidity. It would be reasonable to move the FT-IR microscope-spectrometer to a separate room or to the microscopy laboratory.

List of critical findings:

- Access to the laboratory is not controlled;
- Experts do not use personal protective equipment (PPE) in the laboratory;
- Experts do not maintain records on the use of equipment and its technical maintenance;
- Equipment errors are not identified and no records are available for respective corrective actions;
- Calibration records are not maintained for the equipment;
- No records are maintained for the equipment's periodical checking, parts cleaning, spare parts replacement and experts are not really familiar with the importance of such work;
- Important and expensive equipment is not ensured with permanent electric power, which is a serious risk for any investment.

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The most critical findings:

- Experts do not have appropriate knowledge of relevant forensic methodology. For example, experts lack the capacity to perform chemical derivatization before gas chromatography as recommended by UNODC;
- Experts do not use equipment properly. For example, experts use GC-MS for various analyses. The person who works on this equipment does not know how to check/calibrate, replace spare parts etc.;
- Experts use their office space for sample preparation which is absolutely unacceptable;
- Experts do not have a clear understanding of the methods they use. For example, experts often use the thin layer chromatography method and also perform the same analysis with the GC-MS. Experts correctly noted that they have to use two independent methods for analysis, but it is worth noting that GC-MS analysis consists of two independent methods – chromatography method when the retention time of the substance is checked against the reference standards and mass-spectrometry method when mass-spectra of the peak of the analyzed substance is checked against the reference standard. Based on these two independent data sets it is possible to make a final determination. Hence, there is no need for thin layer chromatography, which saves time and energy for the experts and expenses for the organization.

4.2. Management and Quality Assurance

The main challenge and the goal of the State Forensic Centre shall be to provide forensic services in accordance to internationally acceptable standards and to obtain and maintain ISO 17025 accreditation through a recognized accreditation body.

State Forensic Centre shall adopt ISO 17025 standard to demonstrate that it operates a quality system with technical competence and is able to generate valid test results.

It is highly recommended to assign a full time Quality Assurance Manager who will help to develop and implement all policies and procedures for compliance with ISO 17025 standard's

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requirements. Quality Manager shall have excellent understanding of ISO 17025 standard's requirements in order to facilitate their effective implementation within the daily operation of SFC.

This Quality Assurance Manager shall have the authority and required resources to carry out duties and to identify the occurrence of departures from the quality system or from the procedures for performing tests and/or calibrations, and to initiate actions to prevent or minimize such departures. Quality Manager will control various activities within SFC that will help to reduce backlogs and increase quality of the work.

The SFS shall have a written strategy for future development. This strategy shall outline in detail the way of the development of each forensic direction. SFC shall strive to implement modern methods of examination and to provide relevant trainings to the staff in order to ensure the performance of the casework according to the best practice.

The SFC shall participate in various proficiency testing and Inter-laboratory comparison programs in order to determine the performance of individual laboratories for specific examinations, to monitor laboratories' continuing performance and to establish the effectiveness and comparability of new tests or measurement methods.

The most important thing for the realization of the plans given in the strategy, is obtaining of funds. For this purpose, the SFC shall be focused on the improving of its service and raising awareness on the SFC with physical and legal entities.

It is highly recommended to conduct a comprehensive research regarding service tariffs in order to determine real cost of provided forensic service. At this point there is no clear understanding at the SFC what are real expenses related to the performance of any type of forensic examination, which is a very critical issue.

The SFC is mainly receiving funding from the state budget and requested funding shall coincide with existing needs and expenses to guarantee the good quality performance of the casework. Taking into the consideration that findings received from the state budget are limited

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and cannot completely cover existing expenses it is important to have private income and accumulate additional funding.

As SFC can also provide its forensic services to other physical and legal entities, the determination of service fees is crucial in terms of proposing services to private customers and allocating additional income.

5. SUMMARY OF RECOMMENDATIONS

The biggest challenges for the State Forensic Centre for the following 5 years include improvement of the infrastructure, equipping of the laboratories with advanced technologies, training of the experts and bringing the SFC's activities in line with international standards and recognized best practice.

The SFC shall strive to implement modern methods of examination and to provide relevant trainings to the staff in order to ensure the performance of the casework according the best practice.

The SFC shall adopt ISO 17025 standards to demonstrate that it operates a quality system with technical competence and is able to generate valid test results.

The SFC shall play direct role in a selection process of the new personnel in order to choose best candidate and ensure good quality of work.

The SFC shall participate in various proficiency testing and inter-laboratory comparison programs in order to determine the performance of individual laboratories for specific examinations, to monitor laboratories' continuing performance and to establish the effectiveness and comparability of new tests or measurement methods.

In order to achieve this ambitious goal and facilitate implementation of international standards within the daily operation of SFC, it is highly recommended to assign an experienced forensic advisor to the Director of the Forensic Centre.

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The following recommendations address the immediate needs of the State Forensic Centre in Bishkek. The recommendations mainly focus on the following areas: infrastructure development, functionality, case management, procedures for evidence handling, staff qualifications and skills development, existing laboratory policies and procedures. The implementation of these recommendations will be crucial in improving quality of forensic services and bringing it in line with international standards.

5.1. Forensic experts

The Law “On Forensic Services” foresees the establishment of a Government Commission tasked to certify forensic experts who will be placed on a State register of forensic experts. Establishment and maintenance of such database will create additional bureaucratic step which has nothing to do with the efficient selection and use of experts and will consequently create prerequisites for imminent corruption and abuse.

The SFC shall play direct role in a selection process of the new personnel in order to choose best candidates and ensure good quality of work. The SFC shall establish a selection process to choose the most qualified candidate for each new vacancy.

The following steps will encompass the process used to select new employees:

- Review of application, resume’ and curriculum vita to establish that the candidate meets the minimum educational and professional experience requirements.
- Written examination to establish that the candidate possesses a minimum level of theoretical knowledge.
- An oral interview with supervisory staff to allow the managers the opportunity to personally evaluate each qualified candidate.

Employment offers will be provided to the individual with the highest aggregate score achieved during the selection process. It is highly recommended for the SFC to establish job descriptions and minimum qualifications for each position.

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- All job descriptions and minimum qualifications shall be approved by the SFC prior to adoption.
- Employees shall possess the minimum qualifications outlined in the position descriptions for their respective job title.

It is also recommended to maintain and update personnel files at the permanent facility of the SFC. At the time of assessment, all personnel files are kept at the premises of the Ministry of Justice.

5.2. Facilities

The Government of the Kyrgyz Republic has designated a piece of land and a half constructed building as new premises for the SFC. Initially this building was supposed to be a library and its design does not really fit the needs and requirements of a forensic agency. As UNODC plans to refurbish this new SFC building it would be highly recommended to take into consideration the following recommendations while preparing design documentation to support the planned refurbishment.

Space and construction

Each employee shall have adequate work space to accomplish their assigned tasks. There shall be effective separation between neighboring areas in which there are incompatible activities to prevent cross-contamination. Experts shall have adequate space for report writing and other official communications separate from the area in which examinations are performed. There shall be sufficient space provided for storage of supplies, equipment & tools. There must be specially designated areas for safe storage of reagents and chemicals.

It is recommended to place chemistry laboratories on the top floor of the new building and not in the basement. It is better to place a shooting range and storage rooms for different materials and supplies in the basement.

There shall be adequate and appropriate space available for records, reference works and other necessary documents.

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There shall be adequate space available for each instrument/equipment to facilitate its operation. Accessories shall be stored near instrumentation or equipment to facilitate its use & operation. Work areas shall be designed so as to permit the efficient flow of evidence from the time of its receipt until its return. Airflow shall be designed to minimize or prevent cross contamination. If possible, bio-vestibules shall be used to separate laboratory areas from common areas. Otherwise, laboratories shall establish a means of ensuring and preserving a definite distinction between laboratory areas and common areas. Adequate exhaust hoods shall be provided to have sufficient airflow to provide a safe environment. Adequate lighting shall be provided for all work areas. Adequate plumbing and wiring shall be available and accessible for all tasks. Heating, cooling, humidity control and general ventilation will be adequate. A fire detection system must be in place.

All laboratory entrance and exit points shall be controlled. The laboratories must be secured during vacant hours by means of an intrusion alarm and security monitoring. Measures shall be taken to ensure good housekeeping. Special procedures shall be prepared where necessary and addressed in SOP's. Laboratory areas shall be maintained sufficiently clean and orderly to prevent contamination of samples and to facilitate the efficiency of laboratory operations.

Access to the facility

Access to the operational area of the laboratory shall be controllable and limited. All exterior entrance and exit points shall have adequate security controls. All internal areas requiring limited or controlled access shall have a lock system.

Limited Access

The following areas shall each be secured for limited access:

- Laboratory areas used to examine physical evidence;
- Evidence storage areas within individual examination laboratories;
- Office areas used by experts;

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- Office areas used by technical and administrative support staff;
- Document and records storage areas;
- Chemical and equipment storage;
- Property and Evidence storage facilities;
- Secret Documents Room and Evidence Storage area.

5.3. Evidence Handling

The Chancellery shall be a centralized unit within the SFC. All evidentiary and non-evidentiary items shall only be received by the SFC through the direct documented exchange of items between the Chancellery and the individual submitting the items.

The SFC shall establish and maintain procedures for the reception, storage, laboratory distribution, transportation and return of evidentiary and non-evidentiary items submitted to the SFC for examination. These procedures shall serve as the standard procedures for the collection, storage, security, release, and disposal of evidentiary and non-evidentiary items submitted to the SFC.

The SFC shall establish a procedure to document the laboratory distribution and return of items between the Chancellery and laboratory personnel. The SFC shall not permit the direct exchange of items between experts.

These procedures shall include but not be limited to:

- Requiring all evidentiary and non-evidentiary items to be placed under the control of the Chancellery prior to transfer to the analytical sections for examination.
- Providing guidelines for packaging and labeling of evidentiary and non-evidentiary items prior to storage.

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- Establishing additional security measures for handling exceptional, valuable, or sensitive evidentiary and non-evidentiary items
- Establishing procedures for the temporary storage, internal transfer and final release of evidentiary and non-evidentiary items from the Chancellery.

5.4. Evidence Storage

The Chancellery shall provide storage for evidentiary and non-evidentiary items submitted to the SFC for examination.

General storage facilities shall have controlled access entry points which are only accessible by authorized personnel.

Within the laboratories there shall be a designated space for evidence safe storage during the period of its examination and final return to the chancellery.

The shelving within the general storage area shall be designed to facilitate the efficient storage of evidence submitted to the Chancellery.

Shelving shall be arranged in a manner that will not allow items to be stacked one upon another or one behind another.

The Chancellery storage facility shall have a separate safe or vault to store submission of currency and other valuables.

The Chancellery storage facility shall have a separate storage area to store submission of biological samples that require refrigeration.

The Chancellery storage facility shall have a separate locked storage area to store submission of firearms.

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5.5. Questioned Documents Examination Section

Experts of Questioned Documents Examination Section are mainly using soviet literature in performed analysis where specific methods of examination are described. Section does not have a reference material needed for comparison analysis, namely for passports, driving licenses, ID cards and banknotes.

In order to optimize working process in line with international best practice and standards, it is recommended to purchase the following solutions and equipment:

- Universal video-spectral comparator which shall be equipped with different light sources: Infrared, fluorescence, ultraviolet, oblique and transparent lights. By applying these light sources it is possible to identify various covert security features on the different questioned documents. This universal video-spectral comparator shall be also equipped with the technology to read encrypted information on various chips and barcodes, for example to decrypt information on MRZ (machine reading zone) of the passports.
- It is vital to have a reference database for passports, driving licenses, ID cards and banknotes. These reference databases are needed to conduct comparison analysis on various questioned documents in order to identify different security features on the documents. These databases shall be periodically updated in order to have up to date reference material.
- Stereo microscope with high magnification which will be equipped with oblique lights and will be integrated with personal computer and with HD monitor. By using this stereo microscope it will be possible to perform analysis on various holograms and micro texts.

5.6. Firearms, tool marks and fingerprints examination

In order to ensure good and efficient quality performance of the examinations it is recommended to separately establish and equip laboratories for Firearms, tool marks and fingerprints examinations.

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5.7. Firearms laboratory

For firearms examination laboratory it is recommended to purchase comparison microscope which will be integrated with its software to personal computer and HD monitor. This high quality modern solution of comparison analysis is multifunctional and completely ensures identification of ballistic items according to the latest standards.

It is also recommended to procure several good quality microscopes and baroscopic device in order to perform digital analysis (photo- and video) of the barrel of the gun. It is recommended to build a new shooting range with respective space in order to equip it with bullet catcher and with other relevant systems of analysis.

5.8. Tool marks laboratory

For tool marks examination laboratory it is recommended the purchase of drying cabinets which will be designated to dry and clean biologically contaminated clothes. It also recommended procuring tables with stone or other robust surfaces where clothes or any other item will be placed for examination purposes. In terms of clothes examination it also recommended to procure different sizes mannequins in order to clearly identify location of the damages. It is recommended to equip laboratory with different set of microscopes with different magnifications.

5.9. Fingerprints examination laboratory

In the modern laboratory of fingerprint examination, except traditional methods of fingerprints analysis like powders, brushes and different chemical solutions, it also recommended the use of modern set of methods and respective equipment, for example Cyano Bloom fuming chamber for non-porous items examination and Iodine, Ninhydrin or DFO fuming chambers for porous and semi-porous items examination. In order to use above mentioned methods laboratory shall also be equipped with respective fume hoods in order to ensure health and safety norms.

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6. RECOMMENDATIONS WHICH DO NOT REQUIRE SIGNIFICANT FINANCIAL RESOURCE AND CAN BE IMPLEMENTED WITHOUT ANY ADDITIONAL COSTS

1. Establishment of elementary order which is related to the permanent control of activities within the SFC:

- a) Experts shall not enter the laboratory without wearing lab coats and personal protective equipment (PPE);
- b) Laboratory work shall not be performed in the office side of the building;
- c) Laboratory shall establish and maintain all relevant instructions on how to operate and keep records regarding equipment's proper maintenance;
- d) Laboratories shall participate in Proficiency Testing programs every year. Annual participation in UNODC Proficiency Testing program shall be obligatory;
- e) The most expensive equipment like Gas Chromatograph and FT-IR microscope shall be supplied with the permanent power supply. Special responsible personnel shall be designated in order to elaborate a plan of activities in order to take appropriate actions during emergency situations;
- f) Experts have been advised to prepare accreditation documentation for the most frequent three methods of forensic expertise.
- g) Get rid of old and damaged equipment which cannot be repaired and re-utilized in casework;
- h) All instruments shall be calibrated including laboratory vessels, pipets and etc., it is important to make sure that FT-IR microscope is working properly and for this purpose it is recommended to procure liquid nitrogen and Dewar container.
- i) Laboratories shall safely store all chemicals and reagents in specially designated rooms with appropriate conditions and shall maintain chemicals inventory and get rid of outdated reagents.

7. RECOMMENDATIONS WHICH REQUIRE FINANCIAL RESOURCES:

7.1. Material-technical base:

- a) Optic microscopes shall be upgraded. Existing microscopes are too old and are incapable to process the image in digital format. In case if the funding will not be sufficient to replace the microscopes, it is recommended to procure compatible digital cameras for these microscopes.
- b) Purchase of modern comparison microscope with respective training;
- c) Purchase of modern polarized microscope with respective training;
- d) Purchase of modern GC-MS with respective up to date library. Along with the purchase of equipment it is also important to provide respective training and technical maintenance service under the warranty. After the purchase and use of new GC-MS, if the existing caseload will give this possibility, it would be opportune to move old GC-MS to regional lab. As we did not have the possibility to visit regional labs, we cannot give any further or detailed recommendation.
- e) Section do not have micro-XRF instrument and taking into the consideration the fields of performed expertise, it is important to purchase such equipment along with training and technical maintenance service.
- f) Problem with high purity helium supply shall be solved. Actions shall be taken to solve financial and logistics parts of this problem;
- g) It is highly recommended to procure relevant reagents, reference standards and other consumables which are the most important for chromatography analysis. Some part of them can be obtained free of charge by participating in UNODC's quality assurance program.

7.2. Professional capacity:

- a) Experts at the SFC are required to take relevant training in GC-MS theory and application.

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- b) Experts at the SFC are required to take relevant training in FT-IR microscopy theory and application.
- c) It is recommended to provide experts with English language training courses in order to give them possibility to stay up to date with the latest achievements in forensic sciences.

7.3. Other recommendations:

Staff of the SFC has provided us with a list of certain equipment that they would like to procure. From our point of view it is not recommended at all to purchase the following:

- Analyzer of quality of petrol or any other equipment related to the analysis of the quality of oil products. The main reason is that in the county there are oil products quality examination laboratories and the determination of each parameter of quality requires separate instrument and as a result whole laboratory will be needed for these types of analysis which is really expensive and not cost-effective for the forensic agency.
- It is also not recommended to procure new FT-IR microscope. As we have mentioned before it is important to make sure that existing FT-IR microscope is working properly and can be used in regular casework. If it will turn out that existing instrument is not working properly or cannot handle number of casework, in this case it will be recommendable to purchase new FT-IR microscope.

Assessment Report

ANNEX 1 – PROGRAMME OF THE ASSESSMENT MISSION

PROGRAMME

1st Day, 11 August

| | |
|----------------|---|
| 14:00 - 14:45 | Briefing with UNODC staff |
| 15:00 -17:00 | Meeting with Ms Pyankova Irina , Deputy head of construction and engineering expertise unit and Mr. Iksanov Nikolay , forensic expert on criminalistics |
| 17:00 – 18: 00 | Visit to the new building of the Forensic Centre that will be refurbished in the framework of UNODC Project |

2nd Day , 12 August

| | |
|---------------|---|
| 10:30 – 11:30 | Meeting with Mr. Kutmanov Nurbolot Osmonovich , Deputy Minister of Justice of the Kyrgyz Republic |
| 12:00-14:00 | Meeting with Ms. Alexandra Pomeroy , Bureau of International Narcotics and Law Enforcement Affairs (INL) Director and Mr. Mark Paresi , Senior Law Enforcement Advisor (ICITAP) |
| 14:00 – 15:00 | Meeting with Ms. Bekbulatova Tolkun Mirzakhanovna , Director of State Forensic Center under the Ministry of Justice of the Kyrgyz Republic |
| 15:00 – 18:00 | Overview meeting with senior staff of Forensic Centre: <ul style="list-style-type: none">• Key functions and organizational structure• Laboratories equipment• Legislative framework• Standard Operating Procedures• Quality management system• Any other issues |

3rd and 4th Day, 13- 14 August

| | |
|---------------|--|
| 09:00 - 12:00 | Consultations with Forensic Centre's staff <ul style="list-style-type: none">• Chemistry and Narcology unit• Criminalistics unit• Quality assurance unit |
|---------------|--|

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13:00 – 18:00 Continuation of consultation with Forensic Centre's staff

5th Day, 15 August

09:00 – 10:00 Meeting with **Mr. Ayilchiev Asim Sharshenbaevich**, Deputy Director of the State Forensic Center under the Ministry of Justice of the Kyrgyz Republic

10:00 – 12:30 Briefing with Forensic Centre's staff and plans for follow up

14:00-16:00 Joint meeting with Forensic units of the Ministry of Interior, State Drug Control Service, Republican Narcology Center and independent forensic experts

16:30 - 18:00 Joint debriefing on preliminary findings of the needs assessment mission

List of documents for desk review:

- Background information on State Forensic Center under the Ministry of Justice of the Kyrgyz Republic as of 2013;
- The concept paper on development of State Forensic Center under the Ministry of Justice of the Kyrgyz Republic for the period 2011-2013;
- Organizational structure of the State Forensic Center as 2013;
- Regulation on State Forensic Center under the Ministry of Justice of the Kyrgyz Republic;
- Government Resolution on State Forensic Center under the Ministry of Justice of the Kyrgyz Republic;
- UNODC Needs Assessment Mission Report on forensic services of the Kyrgyz Republic;
- Information about State Forensic Center under the Ministry of Justice of the Kyrgyz Republic;
- Directory of forensic expertise proceeded by State Forensic Center under the Ministry of Justice of the Kyrgyz Republic;
- Law on forensic service in the Kyrgyz Republic;
- Assessment of Forensic Center conducted by the US Department of Justice in 2010;
- List of questions to request information from on State Forensic Center.

UNODC publications and toolkits:

- Forensic services and infrastructure;
- Guidance for the Implementation of Quality Management System in Drug Testing Laboratories;
- Staff skill requirements and equipment recommendations;
- Manual on development of forensic service's capacity.

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ANNEX 2 - PHOTOS OF UNFINISHED BUILDING OF THE STATE FORENSIC CENTRE

MOJ Forensics Building – Exterior View



Outside Basement Rotunda

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MOJ Interior View



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MOJ Attic View

