


Study of crimes in the city of Kokand using GIS technologies and sociological questionnaires


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ABSTRACT

Formulation of the problem. It is known that the influence of the demographic, social and economic conditions of the region on criminal activity is significantly high. In this place, researching the types of crime characteristic of cities with different functions, and identifying hotspots where criminal activity has intensified within the city will further enrich the scientific and practical aspects of the geography of crime. The use of geographic information systems (hereinafter GIS) in the implementation of these tasks is an important issue on the agenda of the field today.

Analysis of recent research and publications. Today, in most developed countries, GIS is widely used to identify common crime areas and organize preventive measures for crime prevention. Research in this regard is almost undeveloped in the Republic of Uzbekistan.

Formulation of the purpose of the article. In this study, theft and drug-related crimes committed in the city of Kokand, Fergana region, were investigated using the Hot Spot analysis method of the Arc GIS (version 10.8) program. The problems of combating crime in identified theft and drug-related crime centres were studied with the help of sociological surveys (conducted with prevention inspectors) and an action plan for crime prevention was developed.

Presentation of the main research material. The indicators of crime levels in the small administrative areas of Kokand, in the Fergana region, have been examined in this study. In addition to the types of crimes that are most commonly committed in large social infrastructures (for example, markets, parks, public places) and their specific characteristics, we also discussed the levels of these types of crimes according to age, gender and population size.

Problems and prospects of the development of crime geography in Kokand city. Hotspot analysis consists of identifying hotbeds of crime in the area and developing proposals and recommendations based on this.

Proposals and recommendations for reducing crime in the city of Kokand. First, this technology is effective in identifying crime trends, organizing preventive measures, planning crime prevention strategies, and improving public safety. Second, GIS is adapted for data processing, mapping, and spatial analysis, thereby increasing the effectiveness of crime analysis and quickly creating a quality criminal analysis map. Thirdly, according to the results of this technology, optimization of the distribution of law enforcement officers, proper and planned deployment, and development of more effective crime reduction measures will help.

Keywords: *crime mapping, geography of crime, GIS, hot spot analysis, spatial autocorrelation, Kokand city.*

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Introduction. Along with the rapid growth of the population in the world, the social problems of the population, especially the level of crime, are also increasing. According to the report "Global Initiative against Transnational Organized Crime", today about 83% of the world's population lives in conditions with a high level of crime [1]. Crime rates are increasing rapidly in developing countries mainly due to poor socio-economic, political and environmental conditions (Jayathilaka T & Wijeratne S, 2018). Especially during the Covid-19 pandemic, this situation has accelerated. Therefore, there is a demand for measures to combat and prevent crime in areas where such a socially dangerous disease exists.

In recent years, the Republic of Uzbekistan has carried out a wide range of activities aimed at crime prevention. As a result, crimes decreased by 5.3 per cent, that is, the total number of registered crimes in 2022 was 105,215, which decreased by 5,867 compared to 2021. But it remains high compared to the beginning of the Covid-19 pandemic. One out of every two crimes committed during this period occurred in the city of Tashkent, Fergana and Tashkent regions. A relatively low rate was recorded in the Navoi, Khorezm and Jizzakh regions. In Kashkadarya and Surkhandarya regions, the total number of crimes and the level of crime are slightly lower than the national indicator [3, p. 461]. Almost

one out of every three crimes committed in the Republic of Uzbekistan occurs in the Fergana Valley.

Fergana region is one of the regions of the Republic of Uzbekistan with high population, density, level of urbanization and migration. In one of the major cities of this region, the level of crime is considered high, and in this regard, the President of the Republic of Uzbekistan emphasized this situation during his visit to the region: "20 per cent of serious crimes committed by minors in the region and 43 per cent of extremely serious crimes occurred in the city of Kokand. This is the worst indicator for the entire republic." [4] Therefore, it is important to study and analyze the criminogenic situation of the neighbourhoods of the city of Kokand on a scientific basis.

The main goal of this research is to determine the regional aspects of crime in the city of Kokand and to determine the foci of serious and drug-related crimes.

Study area. This study was conducted in the city of Kokand, Fergana region (fig.1). The city of Kokand is located in the western part of Fergana

region, in the lower reaches of the Sokh river, at 40° 31' 43" north latitude and 70° 56' 33" east longitude. The city was located in a convenient geographical location, at the entrance of the valley, so it was the capital of the Kokand Khanate. Today, the city of Kokand is one of the industrial, commercial, cultural and tourism centres of the Fergana region. As of January 1, 2023, the city area is 37 square meters. km and consists of 68 mahallas (hereinafter referred to as MFY). The city borders with Furkat, Dangara, and Uchkuprik districts of the Fergana region, Uzbekistan (Makhmudov B, Kh, 2023). Muqimiy town, located on the border of Uchkuprik and Uzbek districts, is also part of the city. An important railway and road (A-373) connecting with the Sughd region of the Republic of Tajikistan and the major cities of the valley (Andijan, Fergana, Margilan), Tashkent region passed through the city. 6.7% of the region's population (264,154 people as of January 1, 2023) live in the city, which ranks second in the region after Fergana and Kuva districts. However, administrative-territorial units of the region are relatively densely populated: 7139 people per 1 sq. km.

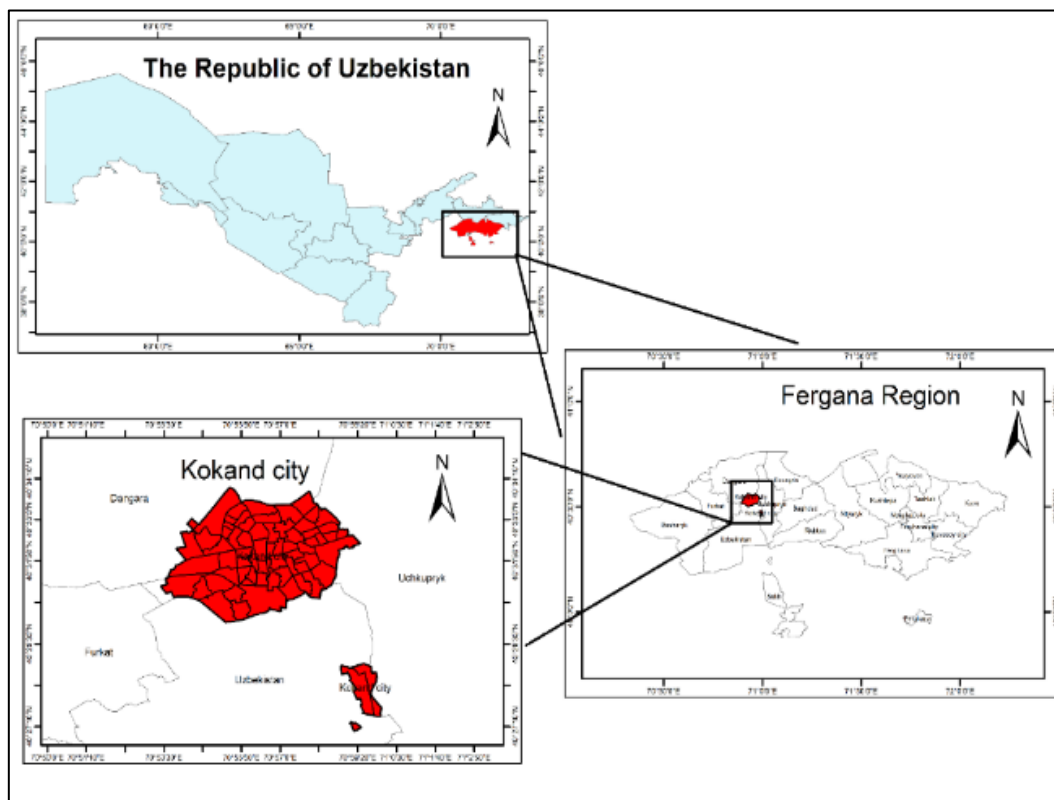


Fig. 1. Study Area

Literature review. The study of crime as a complex issue has been studied by representatives of various disciplines: criminologists, psychologists, demographers, sociologists, and geographers. A number of special theoretical-methodological and practical studies on the geography of crime are carried out by foreign scientists E.Burgess (1925),

C.R.Shaw, H.D.McKay (1942), K.Harries (1999), T.Eisenhardt (2012), H.F.Orsini (2018), S.Chainey (2005, 2021), A.A.Gabiani, R.G.Gachechilidze (1982, 1990), S.P.Luknitsky (1989), S.V.Artyomenko (1993), K.T.Rostov (1993), R.M.Skabara (2003), A.D.Badov (2009), A.V.Kulagin (2009), K.Y. Sikach (2016) and others. In the research of these scientists,

crime geography as a scientific direction of social geography is theoretically based and methodological foundations have been developed.

Issues related to the geography of crime in Uzbekistan have been studied in the scientific works of scientists such as A.S. Soliyev (1999), A.A. Qayumov (2006), M.I. Nazarov (2006), N.K. Komilova (2020), I.R. Turdimambetov (2020, 2021). The impact of population location, density, and migration processes on crime in Uzbekistan can be found in the research of A.A. Qayumov (2006), the hotbeds of drug trafficking in the large cities of Fergana region, such as Kokand, Margilan, Fergana, and M.I. Nazarov (2006).

In the works of the above-mentioned scientists, specific territorial characteristics of the committed crimes and the criminogenic situation were studied. However, large-scale studies on identifying crime hotspots and dividing them into criminogenic zones with the help of modern GIS technologies have not been carried out in these works. This article differs from the above studies in that it studies these issues.

Materials and methods. In this study, the statistics of crimes committed in the city by the Department of Coordination of the activities of internal affairs bodies of Kokand City were used. In 2022, the main focus was on the place and time of theft and drug-related crimes. The coordinates of the place where the crime was committed were determined by the prevention inspector working in the neighbourhood with the help of sociological surveys and crime reports.

According to statistics, the trend of the increase in the number of crimes in the last 10 years (2013-2022) in the city has two forms. The first was a decrease from 2013 to 2018, and the second was an increase from 2019. During this period, theft crime

increased by 5.3 times, and drug-related crimes by 2.7 times (fig. 2).

Hot Spot Analysis. In world experience, the "Hot Spot Analysis" method of the Arc GIS program is widely used to identify crime hotspots. A hot spot is an area with a high concentration of crime in the entire study area. Crime hotbeds are of different sizes and are mainly formed around neighbourhoods, streets or specific objects (markets, stations, etc.) of the city with the highest crime rate (fig. 3).

This method measures the concentration of high or low values for the entire study area. A high index value indicates that high values are clustered in the study area, while a low index value indicates that low values tend to cluster. A z-score is calculated to help determine whether an index value is significant.

Spatial Autocorrelation. Spatial Autocorrelation assumes that "criminal events occurring in different locations are correlated" (Harries, 1999; Eck et al., 2005). Points with similar values are reflected in higher values (positive or negative) of Moran's I index (Eck et al., 2005).

Moran's I index value close to +1 reflects clustering and a value close to -1 reflects dispersion (dispersion), i.e. crimes are not spatially interconnected. Critical value is checked by comparison with normal distribution.

Results. Crimes related to weight and drugs, unlike other types of crime, have the characteristic of being embodied in a certain area, that is, creating a focus. From this point of view, the hotbeds of theft and drug-related crimes in the city of Kokand were implemented through the sequence shown in Figure 3. Geographical observations, interviews with prevention inspectors, and sociological surveys were used to compare, analyze, and describe each crime centre.

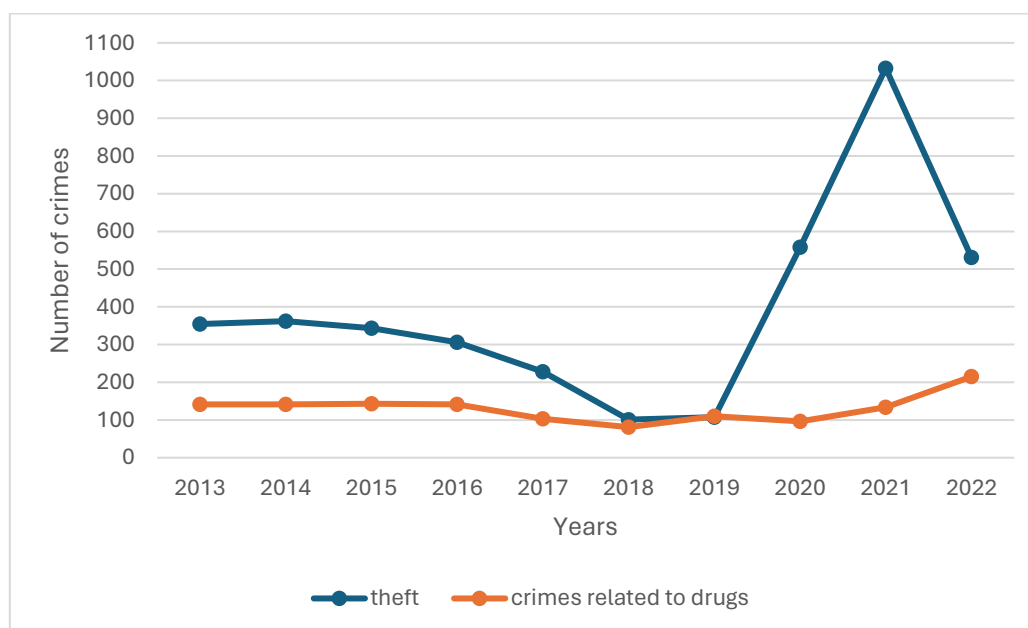


Fig. 2. The dynamics of theft and drug-related crimes in the city of Kokand

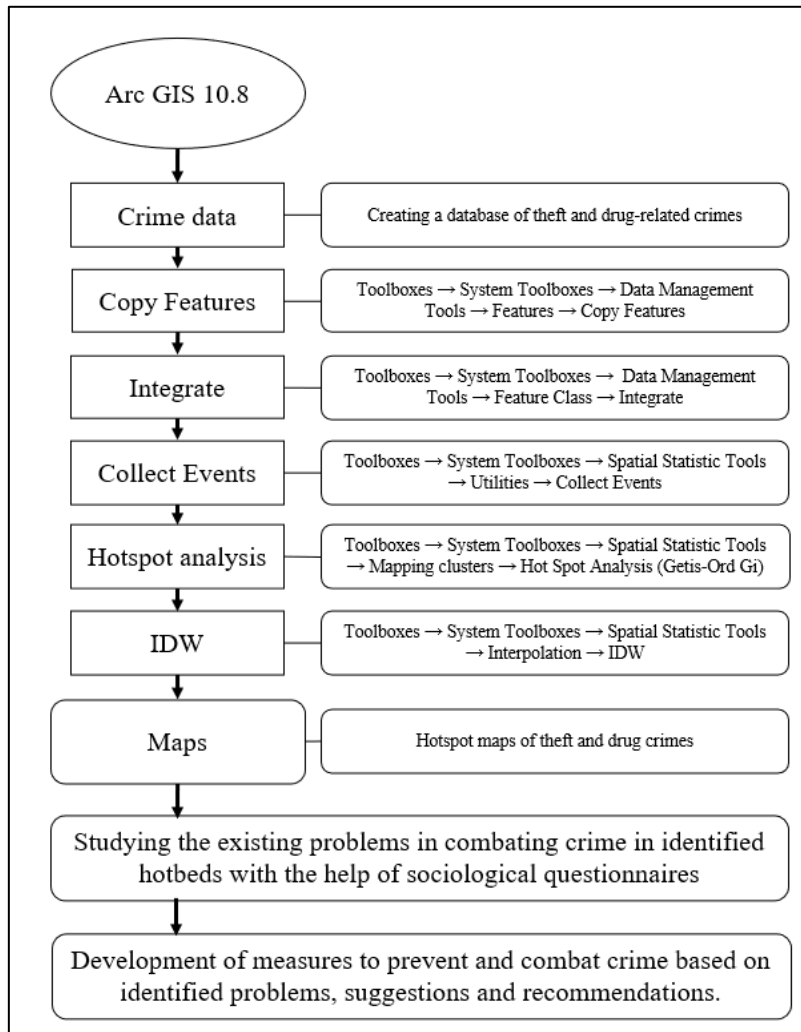


Fig. 3. Research Methodology

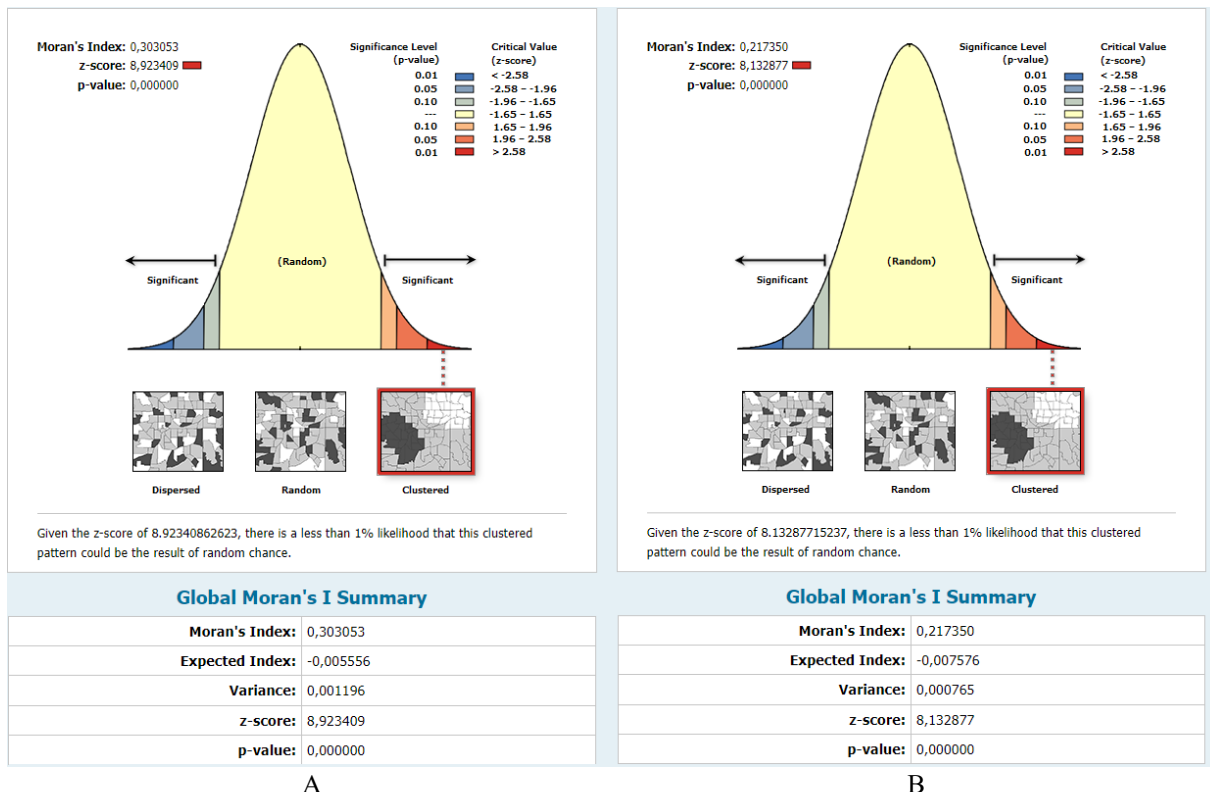


Fig. 4. Spatial Autocorrelation Reports: A – theft, B – drug-related crimes

Burglary in general is the stealthy theft of another's property and is the most common type of crime. This type of crime accounts for more than half of property crimes. Research shows that unemployment and lack of materials (in 70% of cases) are the biggest factors that encourage people to commit theft [4]. Reasons such as deliberate revenge, boasting, and authority are also common.

Among the types of theft, pickpocketing, and theft from vehicles, shops and apartments are common. For example, in 2022, 16.8% (89) of thefts were committed in apartments, 11.7% (62) from cars, 9.2% (49) burglaries, and 9.8% (52) using information technologies.

Thefts also vary in time and place. For example, pickpocketing is characteristic of markets and densely populated areas and is the act of secretly taking personal items (phones, money) from the stalls, pockets and bags. The time of occurrence is mainly during the day when people go to the market. Thefts from vehicles and houses are mostly committed at night.

In recent years, cases of theft of bicycles, telephones and similar personal items from apartment buildings have also increased. Another feature of the crime of theft is the high level of secrecy. For example, in 2022, 408 cases of theft were recorded in the city of Kokand, of which the perpetrator was not identified in 249 (61%) cases.

As a result of the conducted research, the following foci of theft crimes were identified (fig. 5, A).

1. The Great Silk Road shopping complex is located at the intersection of Navbahor, Farobi, and U. Nasir streets of the city. This complex is the largest market area in Western Fergana and includes 8 large markets. It acts as a major trade centre for the surrounding districts (Beshariq, Furkat, Dangara, Uchkuprik, Uzbekistan, Baghdad, Buvaida). Especially on Tuesdays and Saturdays of the week, the population is crowded in the area of the market, there are unique and favourable conditions for shoplifting and shoplifting. To a certain extent, the irregular location of the stalls for sale contributed to this.

2. A.T.Khoqandi region – includes multi-storey buildings with a dense population between A. Temur, Turkestan, and Makhram streets of the city. In this area, the number of thefts is high mainly from car showrooms and apartments. In addition, the theft of high-speed telephones and valuables often occurs in the emergency medical department of Kokand city.

3. Davronbek MFY – industrial enterprises (Avalon textile, Kokand textile and superphosphate, footwear, mechanical plant, etc.), multi-storey buildings, multi-storey houses given to homeless people and returned from penitentiary institution occupied the area between Davronbek and Burchlik streets. In this area, there is a special, favourable

situation for thieves during a certain part of the day (mainly in the evening in the industrial area). Apartment buildings (35, 37, 39, 41, 43, 45, 47, 49, 51, 53) and around Mediapark have become targets for personal items (telephones, bicycles, etc.).

Crimes related to drugs include cultivation, preparation, storage, transportation, purchase, sale, and incitement to consumption. This type of crime has a direct impact on the deterioration of society and the increase in the general level of crime. The drug trade is one of the most profitable "businesses" in the world, and in terms of income, it ranks second after the illegal arms trade. Therefore, studies investigating different aspects of drug addiction are very relevant.

Between 2018 and 2022, the total number of drug-related crimes in the city of Kokand increased significantly by 2.7 times. In 2022, the drug-related crime rate will be 8.1 per 1,000 population, which is 4.8 more than in 2018.

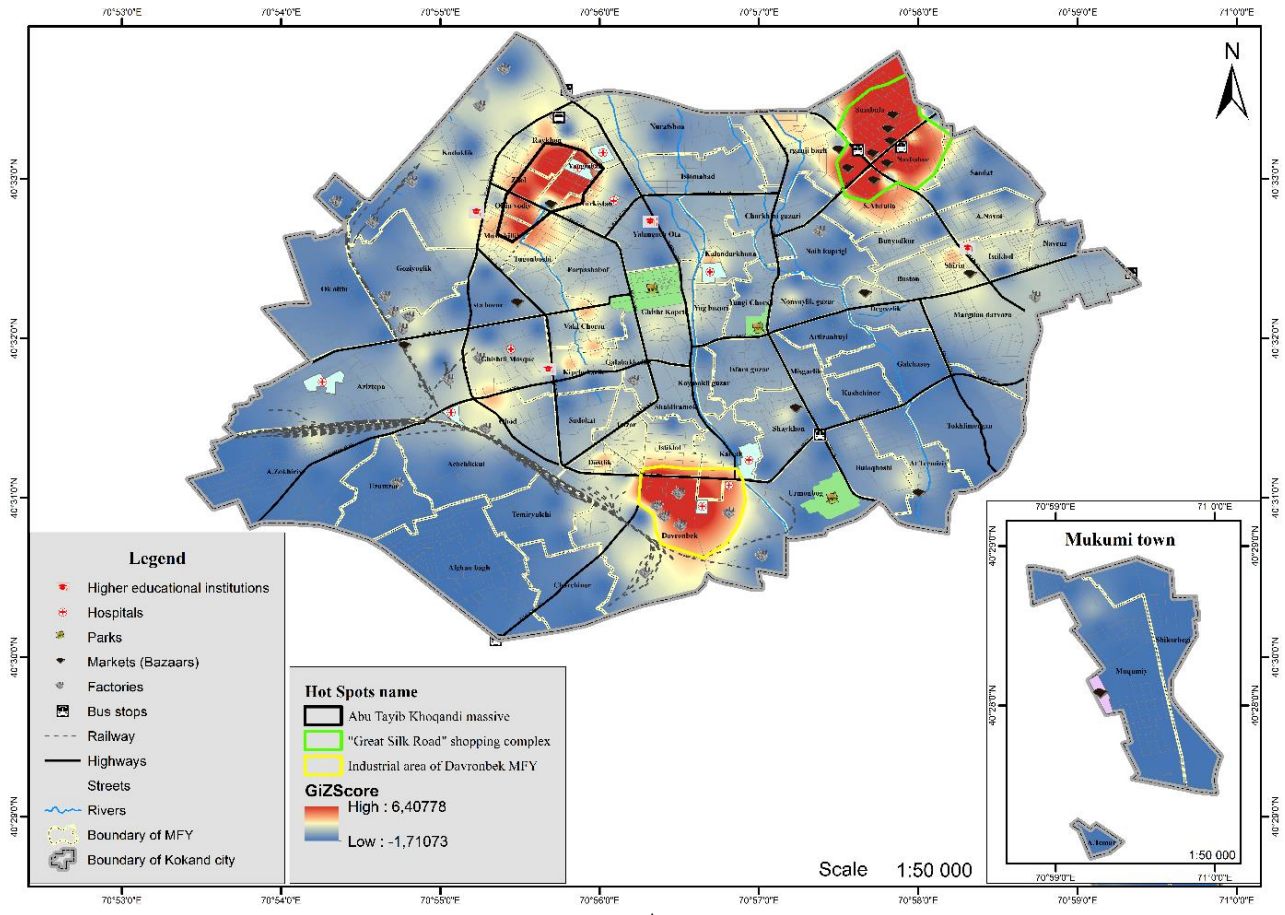
Drug distribution is often characterized by the formation of a "hotbed", where the main centres of trafficking are large cities. For example, M.I. Nazarov (Nazarov M.I., 2006, p. 184) came to the opinion that the main centres of sale of drugs in the city of Ko'kan correspond to the territory of "gipsy neighbourhoods" as the locals say. In the research carried out by the author using the "Hot Spot Analysis" method for the city of Kokand, it was found that, in addition to the "gipsy" neighbourhoods, centres of drug-related crimes were formed in the neighbourhoods of the city where objects such as night clubs and drug dispensaries are located (fig. 5, B):

1. A.T. Khoqandi region – the population of this region is distinguished by the diversity of its national composition. It is the area where the drug trade (especially hashish) is most prevalent. For example, between the 102, 104, and 123 apartment buildings of the Yangiabad MFY, which are part of the district, the employees of the department of coordination of activities of internal affairs bodies of Kokand city put an end to drug trafficking in more than 30 cases. Given the high latency of drug-related crimes, this figure may be higher.

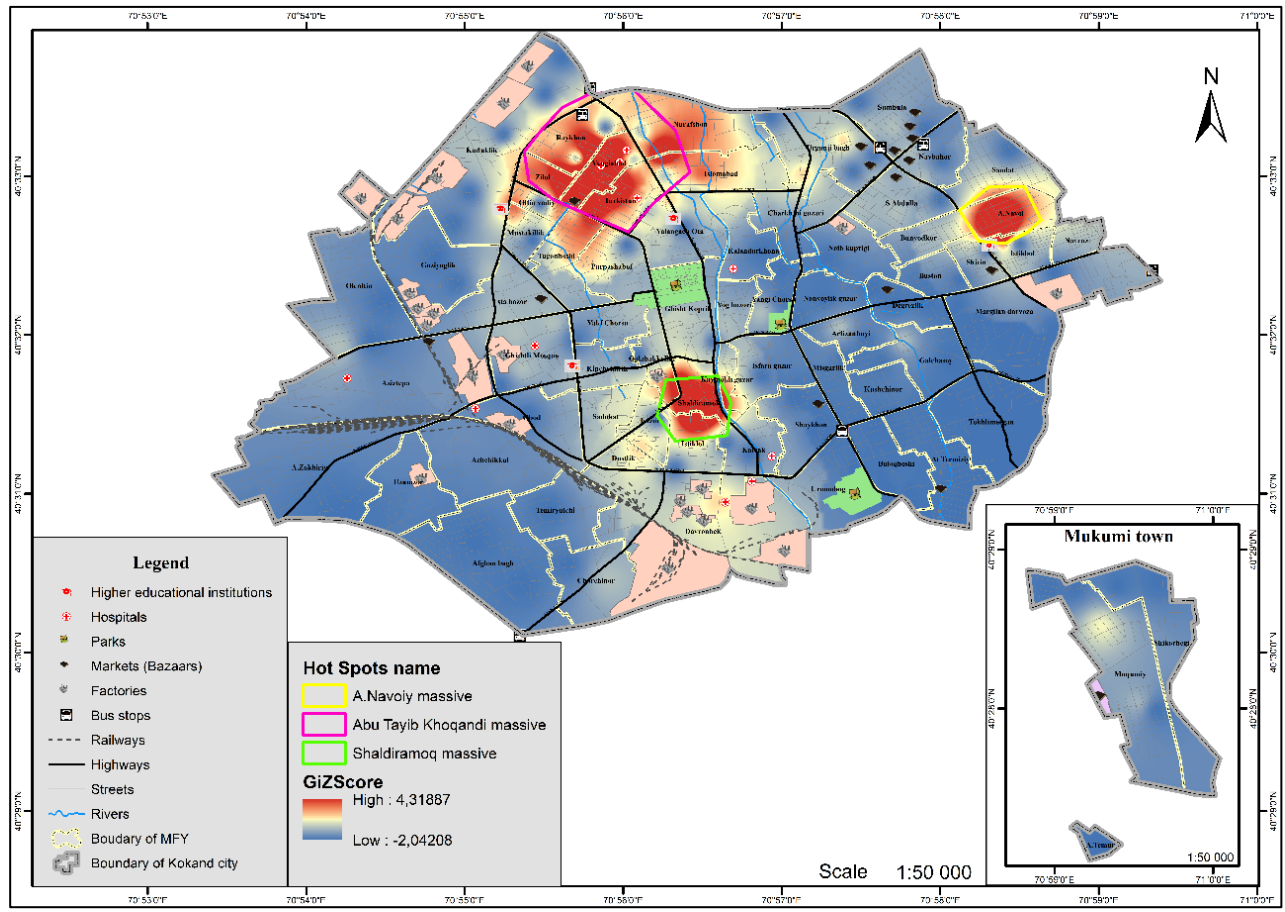
2. Shaldiramoq district – located between A. Temur, Turkistan, Guzar streets. Drug use and sale is widespread among the population. The situation is especially difficult around nightclubs located on A. Temur Street.

3. A. Navoi district is one of the densely populated areas, and factors such as the diversity of the national structure of the population, social environment, and low employment rate have had an impact on its formation as a centre of drug addiction.

The formation of certain drug-dealing groups in general has countless negative social consequences for the region. Firstly, there is a growing population



A



B

Fig. 5. Hotspots of theft (A) and drug-related (B) crimes in the city of Kokand

of drug addicts in the region, and it is always difficult to identify those who consume it. Secondly, there are spiritual and moral changes in the persons addicted to drugs. They cannot fulfill their social duties or it is difficult for them to engage in certain social activities. A drug addict spends a lot of money to buy drugs and gets into a vortex of economic problems. As a result, addicts inevitably become more prone to crime.

In addition to the crimes related to the preparation, storage and sale of narcotic substances, there is a high percentage of persons who commit property crimes such as theft, and fraud under the influence of this substance or for the purpose of purchase (Gabiani A.A, 1990). So, another feature of drug-related crimes is the impetus for the formation of other crimes in the region. By preventing this crime, other crimes can be prevented.

Above, problems of fighting crime in the city of Kokand were investigated by the preventive inspector of problems in fighting crime.

Of the 13 questions contained in this question-

naire, it was found necessary to cover 12 questions directly related to the research topic:

1. First of all, through the questionnaire, it was determined which MFY the respondents are working in, and their work experience. As it turned out, 13% of preventive inspectors who took part in the survey have up to one year, 37.7% from 1 to 5 years, 31.3% from 5 to 10 years, and 18% have more than 10 years of experience. Since the main goal of the conducted research was to determine the criminogenic situations of the regions, the next questions were directly related to this.

2. It is known that in the geography of crime, it is important to determine the most frequent and common crimes in the area, for this purpose, ask the inspectors "Which types of crimes do you think are becoming common?" the question. 30.9% of the respondents admitted that theft, 25.2% drug-related crimes, and 24.4% fraud-related crimes have become relatively common. In the rest of the answers, more crimes such as robbery and hooliganism are indicated (fig. 6).

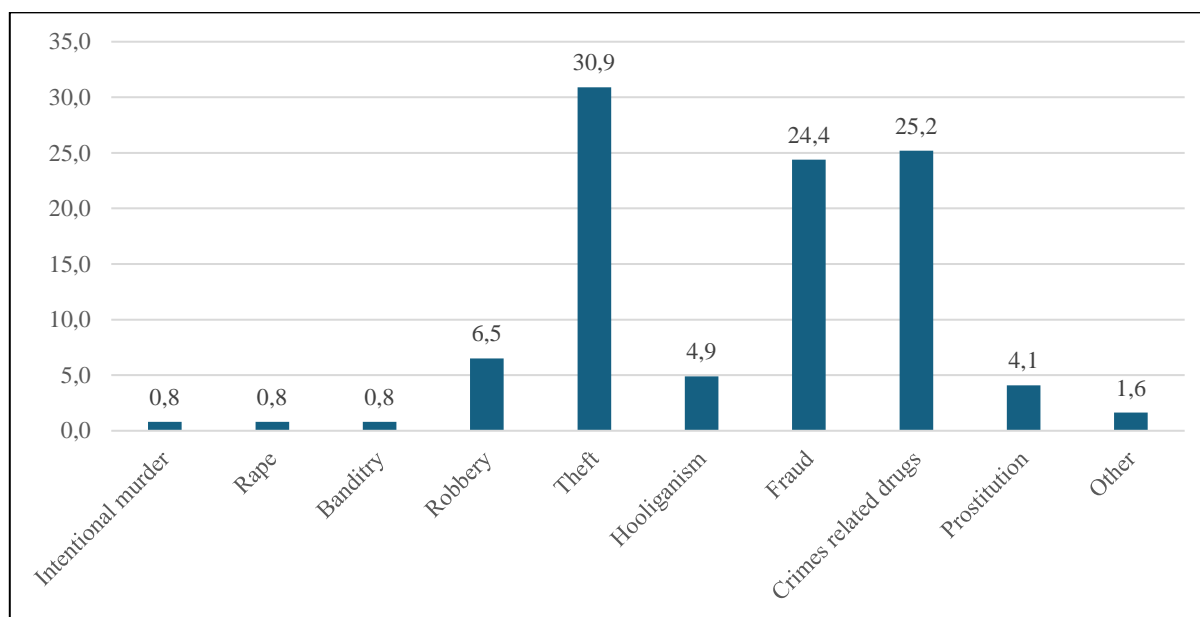


Fig. 6. "What types of crimes do you think are becoming commonplace?" answers to the question

3. One of the main indicators reflecting the territorial aspects of crimes is the place where the crime was committed. For this purpose, "In which part of the territory do you think the most crimes are committed?" when asked the question, the majority of respondents answered apartment buildings (28 per cent) and markets (28 per cent) (Figure 3.2). Also, nightclubs (11 per cent), parks and boulevards (7 per cent) were more frequently mentioned by the respondents. These 8 markets include the Great Silk Road shopping complex, Kokand farmer's market, Kokand car market, Kokand goods market, Old market, Kokand firewood market, and the staff working in the adjacent neighbourhoods concluded

that "the most crimes are committed in the market" (fig. 7).

4. It is important to study the age structure of people who commit crimes, to analyze the criminogenic situation, and also to carry out preventive measures. asked the question. 33% of the respondents concluded that the population aged 18-24 and 32.1% 25-29 commits more crimes. Interestingly, people aged 60 years and older did not mark it at all (fig. 8). Therefore, the share of young people (18-30 years old) in the crimes committed in the city of Kokand is high. It is appropriate to focus preventive measures on this age group.

5. In the next question, "In which time period are

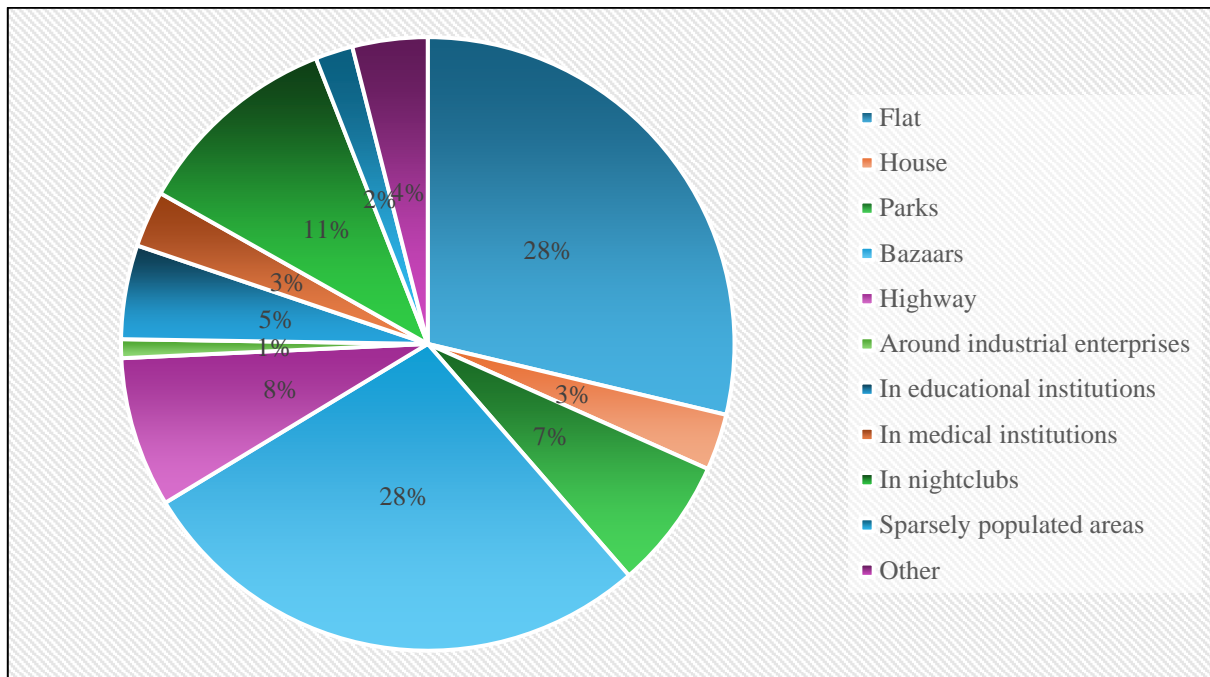


Fig. 7. "In which part of the region do you think the most crimes are committed?" answers to the question

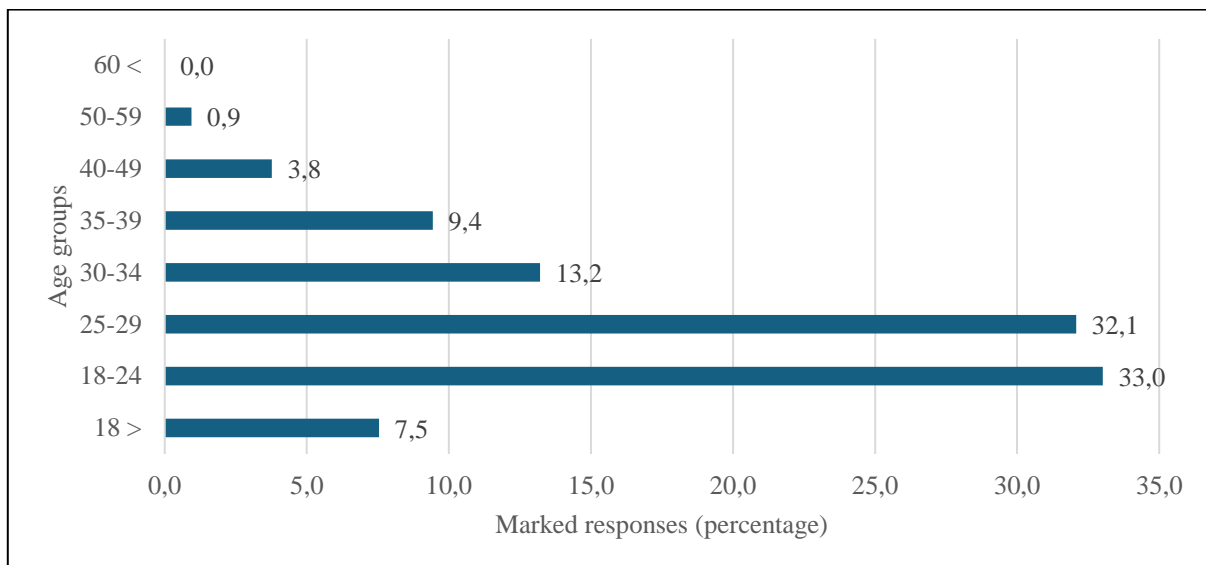


Fig. 8. "Which age group of the population mainly commits the most crimes?" answers to the question

crimes committed the most?" received very different answers to the question. In particular, preventive inspectors working in MFYs adjacent to the market area chose the time between 1200-1500 for this question. Preventive inspectors serving in MFYs, which are mainly apartment buildings, chose the time between 2400-0300 and 0300-0600 midnight (fig.9).

It can be seen from the answers of the respondents that criminals choose a specific time (mainly midnight) to carry out their malicious purpose.

6. It is known that in the geography of crime, the formation of the criminogenic situation of the territory, the study of the factors affecting the commission of crimes is one of the urgent issues. In order to study this issue, "In your opinion, what are

the main reasons and factors that affect the commission of crimes in the territory (MFY)?" asked the question. Inspectors paid particular attention to high unemployment (31 per cent) as the main factor in committing crimes. Also, such factors as drug addiction (17 per cent), difficulty in controlling the densely populated area (13 per cent), and alcoholism (12 per cent) were identified (fig. 10).

Therefore, unemployment and the low level of material security of the population are important in the commission of crimes, especially crimes against property, in the criminogenic situation of the region. It is necessary to pay more attention to the issues of prevention of crimes in the region, prevention, and reduction of unemployment.

7. Research participants were asked: "Do you

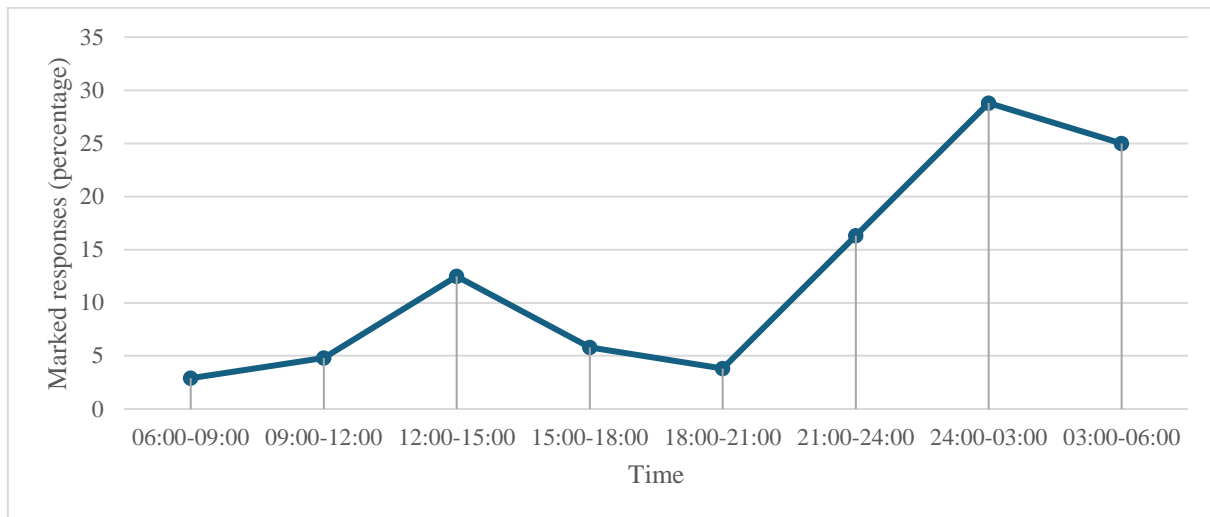


Fig. 9. "What are the most common time periods for crimes?" answers to the question (the picture was compiled by the author based on a sociological survey)

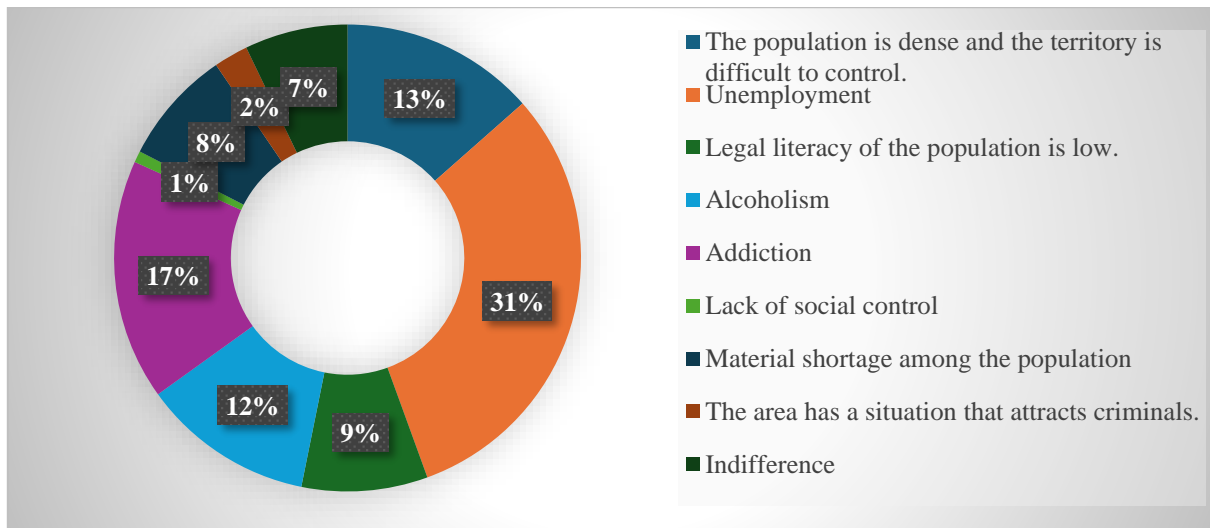


Fig. 10. "In your opinion, what are the main reasons and factors that influence the commission of crimes in the region (MFY)?" answers to the question

think that the presence of different types of markets in the territory of MFY affects crime?" the question was also addressed. This question made it possible to further strengthen the opinions about the large trade centre of the city of Ko'kan and its influence on the geo-criminogenic situation.

Inspectors gave the most answers to this question in the form of "yes, it affects" (88.5 per cent). At this point, it is necessary to emphasize that today the city of Kokand is a major trade centre in the region, and it stands out in this respect. This situation is reflected in the increase of the pendulum migration of the population of the surrounding district to the city, and the increasing number of crimes related to crimes against property.

8. It is known that the scientists of the field paid special attention to the national-ethnic composition of the population of the region. The participants of the survey were asked, "Do you think that the natio-

nal-ethnic composition of the population plays an important role in crime?" when the question was asked, 54 per cent of the respondents specifically emphasized that "no, the national composition of the population has nothing to do with crime." And 46 per cent of the respondents decided that "yes, crimes are committed a lot in areas of different nationalities."

9. The criminal activity of any person, first of all, depends in many ways on his general outlook, lifestyle, family environment, parenting and attention. For example, the main factor in the origin and formation of crime against a person is the family environment. Regarding this issue, "Do family environment, parents' level of education, and children's education have an effect on the origin of crime?" 85.2 per cent of the inspectors who participated in the survey answered "yes" while the rest of the respondents answered "no". At this point, the high intellectual potential of parents is extremely

important for a child's education. Certain educational lessons are taught as subjects in school, but the first instructions about them are given to children in the family. Unfortunately, today, not all people around us have adequate knowledge in this regard.

10. The dynamics of crimes are affected by seasonal changes, especially crimes against property and persons. In field research, it has been proven that the number of sexual assaults increases dramatically in the summer, and that such crimes are rare in the winter, as well as that crimes against property, such as theft and robbery, also change in certain seasons and seasons. For this purpose, the respondents were asked, "Do you think the seasons and seasons affect the increase in crimes?" asked the question. 77% of the respondents answered this question "Yes, most of the crimes are committed in the winter and spring months when the population suffers financially", and 33% said, "No, crime is not affected by seasons and seasons".

11. 21.8 per cent of the crimes registered in the city of Koqan in 2022 were committed by previously convicted persons. This is a high rate among the total number of criminals. In order to study the cause of this type of crime, the inspectors were asked the question "What do you think is the reason for re-offences by those with previous convictions?" the question was asked. As a result of the research, it was found that 44.3% of preventive inspectors answered that recidivists do not feel the lightness of the punishment, the inevitability of the punishment and the feeling of remorse. According to 29.5% of the respondents, unemployment, lack of timely employment, and lack of resources are recognized as the leading factors in the majority of such crimes. Also, the reasons for feeling disconnected from society

after committing a crime, not being satisfied with existing conditions (13.1%) and failure to perform targeted preventive work on time or slowness (9.8%) were also mentioned (fig. 11). Therefore, proper organization of work with unemployed citizens in the city in the future requires proper improvement of preventive measures. It is not surprising that such measures have led to a slight decrease in recidivism rates.

12. Representatives of legal bodies and their material and technical bases have a special place among the factors affecting crime. They act as a "stopping" force in the formation of the criminogenic situation. Technical and informational equipment of law enforcement agencies, skills, territorial composition and number of law enforcement officers have a significant impact on crime. It is possible to have a positive impact on the geo-criminogenic situation by studying and eliminating existing problems in their activities. "What challenges do you face in your work preventing crime?" the respondents gave the following answers to the question (fig. 3.7).

Mainly, 2 problems were recognized by the prevention inspectors: first, material and technical problems, i.e., problems related to area cameras, electronic tablets (to facilitate identification system), and work equipment; the second is bureaucratic, a large number of assignments that are not part of the preventive inspector's duties, the laboratory's trial, and the problems of placing people in the narcology dispensary. Also, the indifference of other official organizations to crime, except for IIB employees; problems of slowness in carrying out preventive work, and low legal literacy of people were also mentioned. From this it can be concluded that there are still bureaucratic problems in the activity of prev-

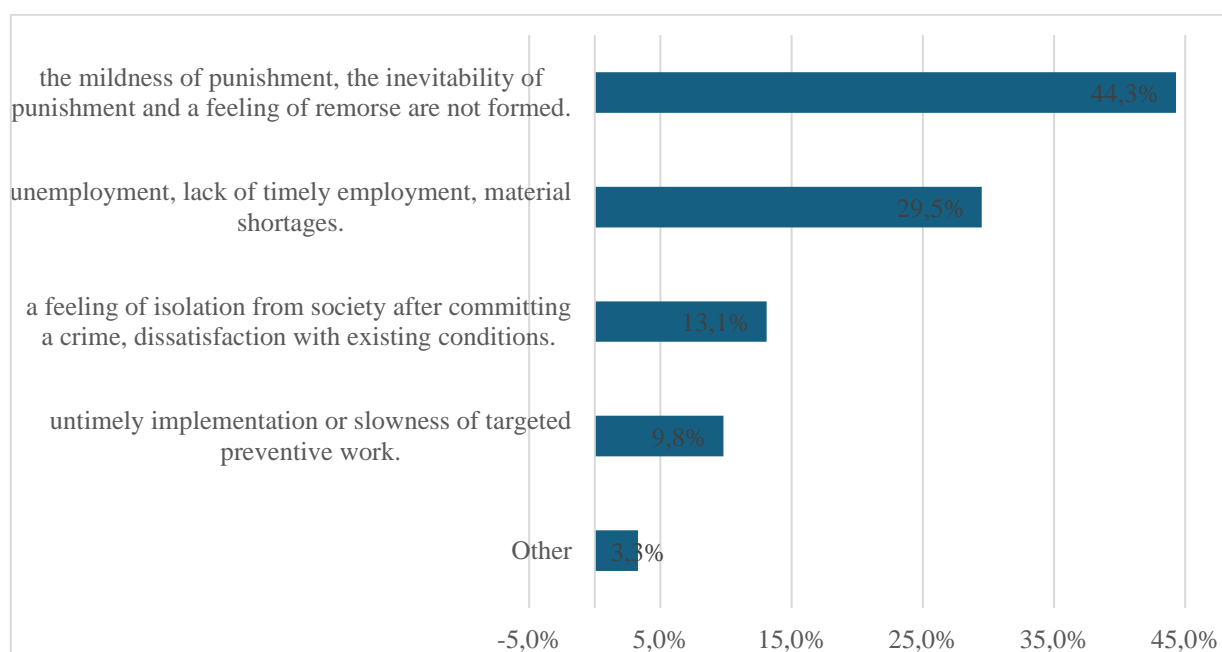


Fig. 11. "What do you think causes recidivism by those with previous convictions?" answers to the question

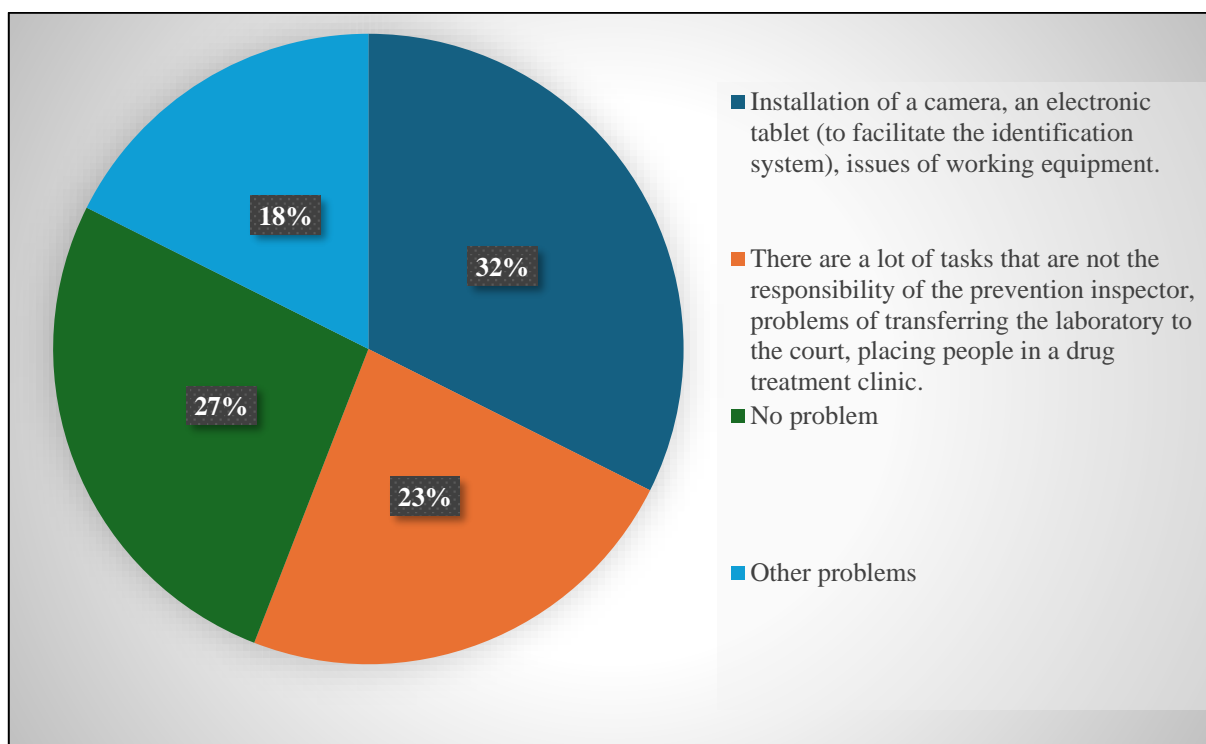


Fig. 12. "What challenges do you face in your work preventing crime?" answers to the question

ention inspectors, it is necessary to revise it, and at the same time, the issue of providing them with modern equipment is also urgent.

13. In the last question, proposals and recommendations were studied using the work experience of prevention inspectors, and knowledge accumulated during their activities. "What do you think should be done to prevent crime?" to the question, the following answers were mentioned by the respondents as the most suggestions and recommendations:

1) Proposals related to ensuring the supremacy of the law, strengthening punishment measures, and serving the full term of imprisonment – 34.1 per cent;

2) Recommendations related to the crime-prone segment of the population, more preventive conversations with young people and their parents, and more activities, strengthening control in crowded places – 24.4 per cent;

3) Recommendations related to the sufficient installation of surveillance cameras in the neighbourhood, control of sufficient lighting of dark places at night – 12.2 per cent;

4) Proposals related to all official agencies to perform their duties diligently and conscientiously, to organize cooperation between sectoral services in order to prevent crime – 9.8 per cent;

5) Other proposals and recommendations – to increase the legal literacy of citizens; study the experience of cities in the green category, provide employment by eliminating poverty; increase the number of employees in the market and similar

places; attaching 3,500 citizens to preventive inspectors serving in each MFY area – 19.5 per cent.

The analysis of the above proposals and recommendations shows that one out of three prevention inspectors came to the conclusion during their work experience that the leading factor in crime prevention is the inevitability of the punishment for the crime and its severity or lightness. As soon as the motive to commit a crime is formed in a person's mind if he feels what the punishment will be, it becomes an important factor in preventing the crime.

The results of such a survey conducted among prevention inspectors provide true, objective information about the criminogenic situation of the city and serve as an important basis for the implementation of necessary measures. In general, the information obtained during the sociological survey, the problems raised, and the suggestions and recommendations made, were used to take measures to prevent and fight against crime (table 1).

Conclusion. Based on the conducted research, it is reasonable to say that the use of GIS technologies has its own advantages and achievements. First, this technology is effective in identifying crime trends, organizing preventive measures, planning crime prevention strategies, and improving public safety. Second, GIS is adapted for data processing, mapping, and spatial analysis, thereby increasing the effectiveness of crime analysis and quickly creating a quality criminal analysis map. Thirdly, according to the results of this technology, optimization of the distribution of law enforcement officers, proper and

Measures to prevent and combat crime in the city of Kokand

Crime hotbeds	Measures to prevent crime and improve the geocriminogenic situation
A.T.Xo‘qandiy district	<p>To provide employment to the unemployed population in Turkestan, Yangiabad, Zilol, Turkestan MFYs, for this purpose, privatization of state industrial enterprises in the territory of Kuduklik MFY, allocation of existing vacant buildings for production;</p> <p>Introducing a security guard at the entrance to the building of the Kokand City Emergency Medical Service, located in the Yangiabad MFY, to prevent crimes related to bodily injury to doctors;</p> <p>Equipping commercial and service shops located on Movarounnahr Street with cameras; To stop involvement of the prevention inspector in activities not provided for in his duties, to eliminate bureaucratic obstacles in the implementation of his activities in the territory of the neighborhood;</p> <p>Control of persons with previous convictions, prone to committing crimes, explaining the inevitability of punishment for any crime;</p> <p>To strengthen cooperation between the prevention inspector and the organization in the placement of persons addicted to alcohol in the drug dispensary, to create relief;</p> <p>Compilation of a list of people who are especially minors and youths who are prone to drug addiction among the population, carrying out preventive work with them in cooperation with specialists;</p> <p>To study the activities of pharmacies selling drugs containing narcotic substances, to prevent the spread of "Tramadol" and "Lyrica" among young people.</p> <p>Increasing the initiative of community activists in sending drug addicts to compulsory treatment;</p> <p>To establish a permanent basis for consideration of any offenses and crimes related to drug addiction directly among the population at the meetings of the "Traveling Court";</p> <p>Taking into account the multi-ethnicity of the population of this zone when organizing "Social prevention" activities;</p> <p>Carrying out victimological activities with a segment of the population that can become a victim¹ of a crime against a person's life and health (a single person living alone);</p> <p>Identifying divorced women who have fallen into a difficult socio-economic situation through housework, carrying out "necessary" preventive measures, providing social and psychological support;</p> <p>Formation of the principle "Crime should not be committed in my neighborhood" among the population, promotion of the principle of inevitability of punishment for any offense. Carrying out legal propaganda on the formation of the spirit of obeying and respecting the laws.</p>
Great Silk Road shopping complex	<p>Placing a fraud warning sign at the entrance to Navbahor and Farobi streets, paying attention to the neglected goods in every shop and stall, warning about sorting;</p> <p>Organization of propaganda activities on the prevention of fraudulent crimes in enterprises, organizations and educational institutions located in the region, among the population;</p> <p>Regulating the market stalls in the Great Silk Road shopping complex, creating conditions for monitoring during crowded times, equipping the stalls that are not equipped with cameras with cameras;</p> <p>To prevent the crime of becoming a crime victim by compiling a list of those engaged in money and material wealth smuggling (illegal currency exchangers, gold dealers, etc.) around the Great Silk Road trade complex; Organize control over a certain distance of the market on Tuesdays and Saturdays, when the population is crowded, from 9:00 to 17:00;</p> <p>Together with neighborhood, public representatives and activists, regularly warn the population about victimological prevention, create an environment of not neglecting the preservation of property;</p>

¹ Victimhood is the characteristic of being a victim of criminal aggression under certain objective conditions due to certain qualities of a person (religious, physical and professional). Victimology prevention is the prevention of certain types of crimes by preventing the emergence of victimogenic vectors, using measures to eliminate or neutralize them, protecting potential victims of crime, and increasing their protection

	<p>Ensuring the employment of the unemployed together with neighborhood public representatives and employment assistance agencies;</p>
A.Navoiy district	<p>Together with the prevention inspector and community representatives of the neighborhood, ensure that the activity of the "Public control center" is always in working condition;</p> <p>Organization of guard service in educational institutions, enterprises and organizations together with neighborhood representatives;</p> <p>Proper organization of night raids by the prevention inspector and assistant, provision of a tablet to facilitate the identification of persons surfing at night;</p> <p>Strengthen individual educational preventive work and control with persons who have been previously convicted of fraud crimes and are on preventive account;</p> <p>Determining general, special, individual and victimological preventive measures in their place, as well as clearly defining the sectoral services, public structures and state bodies to be cooperated in carrying out the measures;</p> <p>Working with the owners of commercial stores and motor vehicles in the region, carrying out permanent general preventive works, promotion and campaigning;</p> <p>Constantly determining the number of unemployed among the population, especially those with previous convictions, and making recommendations to the authorities regarding their employment, as well as taking measures to organize job fairs in cooperation with the neighborhood citizens' assembly;</p> <p>To warn citizens, entrepreneurs, company and enterprise managers about applying to law enforcement agencies in cases of encounter with fraudsters;</p> <p>To stop involvement of the prevention inspector in activities not provided for in his duties, to eliminate bureaucratic obstacles in the implementation of his activities in the territory of the neighborhood;</p> <p>To ensure the organization and implementation of relevant work involving specialists in the formation of the legal culture of the population;</p> <p>Taking into account the multi-ethnicity of the population of this hearth when organizing "Social prevention" activities;</p>
Shaldiramoq district	<p>In night clubs "Troy" and "No. 1" located on A. Temur street, strengthening social control, working with women who are divorced, morally corrupt, having romantic relations with foreign men, starting work to explain that the cases of moral corruption among young people do not lead to good.</p> <p>Prepare a list of those engaged in money and material wealth (illegal money changers, goldsmiths, etc.) around the Kokan farmer's market and prevent the crime of becoming a crime victim;</p> <p>To increase the legal literacy of the population, to carry out promotional activities on the resolution of disputes regarding property, housing, conflicts between neighbors, when one of the family members is incompetent, money and other material assets are stolen, and disputes in business activities are resolved within the framework of the law;</p> <p>Promotion of prevention of any violations and crimes against a person's life and health in Friday events conducted by imams;</p> <p>Development of a road map for controlling crime-prone streets based on the "Safe House" concept together with the prevention inspector and neighborhood community representatives;</p> <p>Constantly determining the number of unemployed among the population, especially those with previous convictions, and making recommendations to the authorities regarding their employment, as well as taking measures to organize job fairs in cooperation with the neighborhood citizens' assembly;</p> <p>To stop involvement of the prevention inspector in activities not provided for in his duties, to eliminate bureaucratic obstacles in the implementation of his activities in the territory of the neighborhood;</p> <p>To warn citizens, entrepreneurs, company and enterprise managers about applying to law enforcement agencies in cases of encounter with fraudsters;</p> <p>Establishing work to clarify that the cases of moral corruption do not lead to good among the population, especially among young people.</p>

Davronbek MFY	<p>2a, 4 high-rise buildings and drug dispensary for homeless people returned from the Penitentiary institution (PI) located on Burchlik street (Davronbek MFY);</p> <p>Send people who are prone to fighting after drinking alcohol to compulsory treatment, strengthen cooperation between the prevention inspector and the organization in placing them in a drug dispensary, and get rid of excessive paperwork;</p> <p>Identification and clarification of morally corrupt persons, persons who live alone, legally unmarried persons, persons living in hiding;</p> <p>Early detection of conflicts in family relationships (spouses, siblings, parents, children, husband-neighbors, relatives, etc.), and elimination of any identified conflicts;</p> <p>To ensure the organization and implementation of relevant work involving specialists in the formation of the legal culture of the population;</p> <p>Ensuring the employment of persons previously convicted of the crime of murder;</p>
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planned deployment, and development of more effective crime reduction measures will help.

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Вивчення злочинності в місті Коканд з використанням ГІС-технологій та соціологічних анкет

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Відомо, що вплив демографічних, соціально-економічних умов регіону на злочинну діяльність є значним. У цьому місці дослідження типів злочинності, характерних для міст з різними функціями, та виявлення гарячих точок активізації злочинної діяльності в межах міста ще більше збагатять наукові та практичні аспекти географії злочинності. Використання геоінформаційних систем для реалізації цих завдань є актуальним питанням, яке сьогодні стоїть на порядку денному. Сьогодні в більшості розвинутих країн ГІС широко використовуються для виявлення поширених злочинних територій та організації профілактичних заходів з попередження злочинності. Дослідження з цього приводу в Республіці Узбекистан майже не розвинені. У цьому дослідженні крадіжки та злочини, пов'язані з наркотиками, вчинені в місті Коканд Ферганської області, були досліджені за допомогою методу аналізу Hot Spot програми Arc GIS (версія 10.8). За допомогою соціологічних опитувань (з інспекторами превенції) вивчено проблеми протидії злочинності у виявлених осередках крадіжок та наркозлочинності та розроблено план заходів щодо протидії правопорушенням. Розглянуто показники рівня злочинності в невеликих адміністративних районах Коканда Ферганської області. Окрім типів злочинів, які найчастіше вчиняються у великих соціальних інфраструктурах (наприклад, ринки, парки, громадські місця), та їх специфічних характеристик, ми також обговорили рівні цих видів злочинів відповідно до віку, статі та чисельності населення. Аналіз гарячих точок полягає у виявленні осередків злочинності на території та розробці на основі цього пропозицій і рекомендацій. По-перше, ця технологія ефективна для виявлення тенденцій злочинності, організації профілактичних заходів, планування стратегій запобігання злочинності та підвищення громадської безпеки. По-друге, ГІС адаптовано для обробки даних, картографування та просторового аналізу, що підвищує ефективність аналізу злочинності та швидко створює якісну карту аналізу злочинності. По-третє, результати цієї технології сприятимуть оптимізації розподілу правоохоронців, правильній та плановій дислокації та розробці більш ефективних заходів боротьби зі злочинністю.

Ключові слова: картографування злочинності, географія злочинності, ГІС, аналіз гарячих точок, просторова автокореляція, місто Коканд.

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