

The importance of mapping crime technology in analyzing the phenomenon of crime

An applied study on the new city "Ali Mendjeli" in Constantine

أهمية تقنية الأخرطة في تحليل ظاهرة الجريمة  
دراسة تطبيقية على المدينة الجديدة "علي منجلي" بقسنطينة

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Received date:07/5/2023

Acceptance date:14/6/2024

**Summary:**

This study tries to show the importance of employing the technique of crime mapping in addressing the phenomenon of crime as an accurate scientific design based on foundations, detects, and identifies places that may be a security risk or constitute hotbeds of crime.

In fact the applied study allowed, through the combination of official statistics of crime in a specific area and its distribution on its map, to identify what is known as black spots, hot spots and safe places and extract elements of great importance about this, and thus take the necessary measures towards them, such as fighting them, surrounding them and containing the signs of their origin, which would contribute to stabilizing the security element and achieving the quality of life in it .

**Keywords:** mappIng, Crime, Security, Official Statistics, New City,

الملخص:

تحاول هذه الدراسة تبين أهمية توظيف تقنية الأخرطة في معالجة ظاهرة الجريمة باعتبارها تصميم علمي دقيق يقوم على أسس، يكشف ويحدد الأماكن التي يمكن أن تكون خطرا أمنيا أو تشكل بؤرا للإجرام.

حقيقة سمحت الدراسة التطبيقية من خلال المزاوجة بين الإحصائيات الرسمية للجريمة في منطقة محددة وتوزيعها على خارطتها بتحديد ما يعرف بالنقاط السوداء والمناطق الساخنة والأماكن الآمنة واستخلاص عناصر على درجة كبيرة من الأهمية حيال ذلك؛ وبالتالي اتخاذ الإجراءات اللازمة تجاهها كمحاربتها وتطويقها واحتواء بؤادر نشأتها، وهو ما من شأنه أن يسهم في استتاب عنصر الامن وتحقيق جودة الحياة بها.

الكلمات المفتاحية:

الأخرطة، الجريمة، الأمن، الإحصائيات الرسمية، المدينة الجديدة،

## Introduction

Since the 1950s, police agencies in various countries have established units specialized in collecting statistical data on crime in all its forms. In the early 1970s, police agencies began compiling annual crime statistics to be reported to the Ministry of Interior.

These developments came in recognition of the importance of numerical language in expressing the reality of the crime phenomenon deeply rooted in history. However, relying solely on numbers disconnected from the various prevailing circumstances in the statistical field could not be relied upon in decision-making and formulating security policies, especially with the emergent changes affecting crime patterns and perpetrators, such as cybercrime. It became imperative for security authorities to harness all their human resources and financial capabilities to keep up with the occurring changes.

With the increasing importance of spatial geographical information in decision-making and as an advanced stage of all this development, crime mapping technique emerged. Although its first appearance was in advanced Western countries, led by America, which witnessed a growth and development in crime, it soon spread worldwide, acknowledging its effectiveness and role in understanding many of the issues that plagued security matters, with the aim of uncovering the greatest number of truths.

Many advantages have qualified the technique to play a pivotal role in analyzing various types of crime and assisting security agencies in understanding them through comprehending the relationship between individuals (criminals and victims), places, and times where the crime occurred, enabling them to visualize and understand the situation and draw many facts that were previously inaccessible.

This study aims to introduce crime mapping technique, its fundamentals, and its main uses in analyzing the crime phenomenon, elaborating on it further through an applied study conducted within the framework of a research project with social and economic repercussions on the new city "Ali Mendjeli" in Constantine.

## Conceptualization:

### 1.1- Mapping:

#### 1.1.1. Linguistically:

According to the dictionary, a map is what the surface of the earth or part of it is drawn on, and collectively they are called maps. Crime mapping refers to documenting its occurrences. (Almaany, 2024, "akhrata". "أخرط")

The term "crime mapping" is an unofficial translation of the English phrase "Crime Mapping," used by crime analysts in law enforcement agencies to draw, display, and analyze reported crime patterns.

#### 1.1.2. Terminologically:

Crime mapping is the transfer of documents, data, and reports in a form that decision-makers can use to visualize the situation and understand conditions at one moment, and crime maps are types that are defined according to the goals and purposes for which they were prepared. (Abu Shameh Abdel Mahmoud et al., 2010, p. 149)

The concept of crime mapping intersects in many studies with the geography of crime, considering that the map expresses the geography of the place, linking and interpreting the geographical space and various criminal activities within it. (Hamadi, Boumkhlof, 2022, p. 179)

## **2.1- Crime:**

### **2.1.1. Linguistically:**

Crime is related to gain and guilt. The origin of the term (crime) "جرم" is cutting the fruit from the tree, and (criminal) "جَارِم" is a man who commits a crime, and (criminals) "جرام" refers to the people who commit crimes, and (crime) "جريم" refers to the fruit of crime. (criminality) "الجرامة" is the bad fruit. This terminology is metaphorically used for any undesirable acquisition (tree crime). "جرم النخل" is cutting the palm tree, (someone's crime) "جرم فلان" means someone committed a sin, and (crime for his family) "جرم لأهله" means earning for them, and (crime) "جريمة" means harvesting. (a man committed a crime) "أجرم الرجل" means he committed a sin, and (someone honored) "اجترم فلان" means someone sinned. (Boutros, 1998, p. 104)

### **2.2.1. Terminologically:**

Crime is defined as: an individual's aggression against another in their honor, property, belongings, or person. In this sense, it is considered a social phenomenon present in every society, as wherever there is social life, there is crime.

It is also defined as: behavior that violates the ethical rules established by society, for which negative sanctions are formally imposed. Therefore, crime is behavior that an individual commits, which is met with complete rejection and punishment by the society in which they reside. (Marzi, Wadia, 2014, p. 173)

It is further defined as: a reaction that contradicts the general sentiment of the community, whether it is individual or collective behavior that constitutes a breach of the social control rules established by society, which can be expressed through a set of values, traditions, and customs prevailing in the community. (Samia, Mazia, 2021, p. 130)

It is worth noting that the concept of crime generally falls within three adjacent fields of knowledge: law, sociology, and psychology, each of which has its own definition of this term associated primarily with its cognitive specificity.

## **3.1- Security:**

### **3.1.1. Linguistically :**

According to the Muheet Al-Muheet dictionary: (Secure) "أَمِنَ" means to feel secure, and (Security) "أَمْن" means safety and security. It provides reassurance against fear, whether from an enemy or otherwise, or it is the absence of expecting harm in the coming time. Security also refers to religion and character. (Boutros, 1988, p. 14)

### **3.1.2. Terminologically:**

Security is a broad and difficult-to-define concept, characterized by its controversial nature. As Barry Buzan sees it: it is a contested concept. Although there is generally a distinction between the term "defense," which is agreed to have a military meaning, and "security," which is more related to the internal life of states, this is not sufficient to understand the significance of security. Security means providing protection, reassurance, and safety for members of society from potential or expected harm. (Ghazali, Zarraga, 2017, p. 362)

It is an ecological system that constantly changes, governed by social organization processes of competition and solidarity. Individuals learn how to compete over scarce resources - individually and collectively - and the real nature of competitive relationships changes over time and is linked to changes in environmental conditions. (Ismail Qira, 2004, p. 51)

New cities are defined as: cities built on the basis of pre-planning to achieve integration and harmony between urban level, functional level, and activity level. (Zuchelle, 1984, p. 50)

"A. C. Scot Binod" defines the new city as: one built in areas free from urban concentration and in virgin places that have never been settled before, allowing its planners to start from scratch. It must have sufficient space to make it an independent entity and must have a sufficient number of industrial projects to create a wide job market. It must also have commercial, educational, social, and cultural institutions to meet all the needs of individuals and families. Such cities are completely different from subsidiary cities, as well as from cities that are completely demolished and rebuilt in the same location. (Abdul Hamid, 2004, p. 10)

## **2- The Importance of Crime Statistics:**

There has been a growing interest in crime statistics in advanced countries, due to the recognition of their importance, although initially, their form was limited to statistical data collected and recorded by courts, correctional institutions, and security agencies, regarding crime figures and data that only reached their attention. Then, the concept of criminal statistics and their uses evolved from a primitive concept related primarily to crime figures and data to a broader and more comprehensive concept to ultimately express the quantitative scientific method used in the field of studying criminal phenomena with the aim of controlling it based on accurate and sound criminal statistical data and information. Crime, with its raw numbers, does not convey useful information unless read in conjunction with relevant social, economic, and political variables. Therefore, crime statistics have transitioned from mere figures of individual crimes to statistics for the criminal justice system containing comprehensive and interconnected data.

The importance and benefits of crime statistics, or what is commonly referred to as criminal justice information, include:

Crime statistics data are the means that aid researchers and scholars in the fields of criminal, social, and economic sciences.

Security, from the sociological perspective, is a fundamental need that ranks second after the need for food in the hierarchy of individual needs. It is essential for the individual's survival and the exercise of their activities. Security is a state of mind or feeling that occurs in the absence of fear, anxiety, and tension. Social security is the sum of individuals' security and signifies stability.

### **4.1- Official Statistics :**

#### **4.1.1. Linguistically :**

The term (counted) "أحصى" means to enumerate, count, and encompass. The thing counted is called (counted) "محصى", and the passive participle is (counted) "محصى". (Almaany, 2024, under "أحصى").

#### **4.1.2. Terminologically:**

Statistics are defined as: numerical information about specific statistical populations or about specific activities tabulated in various tables, categorically arranged to clarify these populations, their trends, and their interconnections. (Abdel Aziz, 1985, p. 8)

"McLave and Terry" define it as: Statistics is the science of data, which includes the collection, classification, summarization, organization, analysis, and interpretation of numerical information.

#### **5.1- The New City :**

##### **5.1.1. Linguistically :**

City : Plural of (city) "مدينة", indicating an urban settlement larger than a village. Its plural forms are (cities and towns) "مدائن" and "مُدُن". The term is derived from "مَدَن" meaning to settle or establish, (Butrus, p. 843).

##### **5.1.2. Technically:**

"Park and Burgess" and their followers consider the city as:

Crime statistics, predictions, and outcomes serve as a basis for developing security plans and criminal policies and are relied upon by organized administrative decisions for police forces, both geographically and quantitatively, in the present and future.

Crime statistics are indicators that reveal criminal phenomena, deviance, negative practices, and patterns to society.

Crime statistics are a means to evaluate the performance of police, prosecution, judiciary, correctional, and punitive institutions, as well as to assess the quality of performance in various criminal justice, social, and administrative services provided by the police.

Crime statistics serve as indicators for evaluating both objective and formal criminal legislation and the efficiency of security measures.

Crime statistics are used as a means to streamline performance in the justice system, coordinating between those agencies to control the flow of cases through the stages of the criminal justice system, preventing congestion in courts or prosecution offices, and avoiding overcrowding in prisons and correctional institutions, which could lead to their failure to achieve their objectives.

Crime statistics reflect indicators of imbalance in population structure, social development plans, and state service distribution policies.

Crime statistics are indicators of the security and stability status that enable investors and financial institutions to direct their activities and formulate their economic policies.

Understanding the role of crime victims in the spread of certain criminal phenomena and their potential contribution to addressing those phenomena.

Introducing the community to the problem of crime and the role of criminal justice agencies, thereby understanding public opinion on police services.

Estimating the financial cost of crime. (Abu Shameh Abdel Mahmoud, p. 38)

### 3- Mapping: Crime Mapping

Crime mapping design is primarily considered an artistic and engineering endeavor that requires specialized skills. However, this doesn't mean that a fine artist alone can design crime maps. Crime mapping design is a comprehensive activity that requires expertise in statistics, social and economic sciences, surveying engineering, environmental studies, law, police and security sciences, geography, and information and communication technologies. Additionally, it relies on some commonly used computer programs in this field, such as statistical software packages like SAS, SPSS, Microsoft Excel, and various graphic visualization options and other necessary programs for analysis and presentation.

#### 3.1- Information on Crime Maps and their Design:

Crime maps provide a vast array of information, including general information useful for senior officials and more detailed and precise information beneficial to specialists in the map's subject area. Among the most important information revealed by crime maps are:

**3.1.1- Locations:** The basis upon which all information needed by crime analysts is built, such as locations of objects, individuals, significant activities, important facilities, current security incidents, expected security incidents, hotspots, security apparatuses, vehicles, and ready-to-deploy machinery.

**3.1.2- Distances:** Their importance arises when they are read in conjunction with events and objects, such as the distance between the crime scene and the police station or the victim's residence.

**3.1.3- Directions:** Their value is apparent in their relationship to locations, distances, and the site of the security incident, such as stating that fires occurred at a site, moved northward, then changed direction eastward for some reason.

**3.1.4- Patterns:** Patterns have scientific value in crime analysis and influence methods of crime detection, investigation, and the development of criminal legislation. Patterns are generally classified as:

Random patterns, uniform patterns, patterns composed of groups of patterns, and scattered patterns. (Abu Shama Abdel Mahmoud et al., p. 155).

As for crime mapping design, it is primarily considered an artistic and engineering endeavor that requires specialized skills. Crime mapping design is a comprehensive activity that requires expertise in statistics, social and economic sciences, surveying engineering, environmental studies, law, police and security sciences, geography, and information and communication technologies. Additionally, it relies on some commonly used computer programs in this field, such as statistical software packages like SAS, SPSS, Microsoft Excel, and various graphic visualization options and other necessary programs for analysis and presentation.

#### 4-Geographic Information Systems (GIS) as a Form of Technological Advancement:

The establishment of Geographic Information Systems (GIS) is closely linked to advancements in various scientific fields. Surveying and cartography, for instance, contributed to laying down general principles and tools for measuring and representing Earth's surface features on maps. Additionally, computer science provided a structural framework for storing and organizing information, while mathematics offered tools for processing the geometric aspects of geographic phenomena—transforming three-dimensional reality into two-dimensional representations on paper. Through the integration of these fields with

demographic data and other surveys on social, economic, and environmental conditions, a wide range of scientific, commercial, and service applications for GIS emerged.

In academia, these applications extended across various disciplines, including archaeology, oceanography, geography, and urban planning, as well as finding extensive commercial applications in marketing and real estate sales. The scope of GIS applications further expanded to include the service sector, such as telecommunications companies managing and maintaining their infrastructure, postal services, transportation, and local and regional government spatial organization. GIS has been used for data collection and storage purposes, with its most beneficial application being map creation and population censuses.

In the academic field, GIS has demonstrated its ability for in-depth analysis and proven efficient in natural resource management and marketing. Forest ownership companies have utilized GIS to ensure sustainable forest management and tree harvesting upon maturity. Wholesale and retail trade companies have employed GIS to analyze the spatial organization of their customers and to identify and evaluate proposed new service locations before implementation. (Mudar Khalil, 2014, pp. 3-4).

### **5. The new city of Ali Mendjeli "A Geographical Study":**

The new city of "Ali Mendjeli" was established through the master plan for development and urbanization, which was completed in accordance with Law No. 90/29 dated December 1, 1990, concerning the determination of tools for development and urbanization with the aim of alleviating the pressure on the main city and redirecting its population surplus to it. (Law 90/29, 1990)

The new city is located on the western side of the Ain El Bey plateau along the axis of the local road No. 101 linking the cities of El Khroub and Ain Smara, spanning an area of 1500 hectares.

The new city is bordered to the north by the east-west highway, to the northeast by Mohamed Boudiaf Airport, to the east by national road No. 79, and to the west by the foothills of the plateau, specifically the slopes of El Aifour, which still retain their agricultural character.

It is worth noting that the new city (Ali Mendjeli) occupies an excellent location in relation to the city of Constantine, supported by several advantages, including:

Relative proximity to the city of Constantine, located to its south at a distance of approximately 13 km.

Its location on road axes:

Local road No. 101: which traverses and divides it into northern and southern sections, forming its main structured axis.

National road No. 79 which passes nearby.

The east-west highway passing to its north at a distance of 4 km, with which it is connected by a connecting road. This connection occurs at an interchange called "COSIDER Interchange" located on the east-west highway axis.

Mohamed Boudiaf Airport located to its east.

The ease of its location and its availability of land suitable for development, allowing for the provision of all requirements for a new city outside the valleys, areas of natural hazards, and the protection of fertile agricultural lands.

### 5.1. Real Estate Framework for the Site of the New City (Ali Mendjeli):

The site area of the new city of Ali Mendjeli is located within the towns of El Khroub and Ain Smara, spanning 1500 hectares. It is noteworthy that there is some spatial overlap between the three properties as shown in the table. However, this factor did not prevent the establishment of the new city under the state's will and its utilization of development and urbanization laws.

Nature of property	State	Municipal	Private	Total
Surface (H)	971.1	206.4	322.50	1500
Percentage %	64.74	13.76	21.50	100

### 5.2. Division of the New City (Ali Mendjeli):

#### 5.2.1 Division into Districts:

The district serves as an intermediary level between the neighborhood as the smallest community unit and the city as a whole. The aim of creating this level is to establish a spatial organization system for the new city.

In this context, the 20 neighborhood units have been grouped into 5 districts, with each district comprising several neighborhood units, as illustrated in Map (KH03) dividing the new city into districts (URBACO, 1994, p.53).

District No. 01: This district includes neighborhood units (1, 2, 3, 4) and covers an area of 227.18 hectares (15.14%), occupying a central location in the city.

District No. 02: Located north of District No. 01, it comprises 4 neighborhood units (5, 6, 7, 8) and extends over an area of approximately 219.74 hectares (14.65%).

District No. 03: Situated in the eastern part of the new city, it is bordered to the north by the activity area and District No. 02, and to the west by Districts No. 01 and 02. It also includes 4 neighborhood units: 9, 10, 11, 12, covering an area of 227.22 hectares (15.14%).

District No. 04: Located in the northwest part of the new city, it is bordered to the north by District No. 02, and to the east and south by District No. 01. It also comprises 4 neighborhood units: 13, 14, 15, 16, covering an area of 183.31 hectares (12.22%).

District No. 05: Positioned to the south, it is bordered by Districts No. 01 and 03 to the north. It encompasses 4 neighborhood units: 17, 18, 19, 20, with an area of 301.28 hectares (20.08%).

Meanwhile, the activity area and the cemetery remain isolated from the neighborhood units and are not integrated into any district, covering an area of 341.27 hectares. The following observations can be noted:

- Equal number of neighborhood units in each district.
- Relatively similar area for each district.
- Division of districts follows the arrangement of neighborhood units according to their numbers.
- Organized geographic distribution of districts.

### 5.2.2 Division into neighborhood units. (URBACO, 1994, p49):

Designation of neighborhood units		Space H	Number of residences	Population
<b>District 01</b>	U.V 01	65.8	6295	31475
	U.V 02	43.43	1499	7495
	U.V 03	34.04	University	0
	U.V 04	72.67	519	2595
<b>District 02</b>	U.V 05	86.32	3048	15240
	U.V 05 ext	56	242	1210
	U.V 06	40.38	2583	1210
	U.V 07	62.17	4512	12915
	U.V 08	19.96	2307	11535
<b>District 03</b>	U.V 09	35.2	3934	19670
	U.V 10	39.1	700	3500
	U.V 11	85.56	Military Hospital	0
	U.V 12	33.02	556	2780
<b>District 04</b>	U.V 13	58.45	1436	7180
	U.V 14	48.51	4302	21510
	U.V 15	47.99	1000	5000
	U.V 16	16.04	2000	10000
<b>District 05</b>	U.V 17	82.03	5798	28990
	U.V 18	77.33	6489	32445
	U.V 19	63.98	2500	12500
	U.V 20	68.19	4088	20440
	U.V 20 ext	110	6250	31250

Source : URBACO 2014

## 6. Crime in the new city "Ali Mendjeli" through the National Security Records:

### 6.1. Toll of crimes recorded in the new city "Ali Mendjeli" in 2016-2017:

Nature of the crime	2016			2017		
	Service	Recorder	Done	Service	Recorder	Done
Felonies and misdemeanors against	S U S A M 01	123	112	S U S A M 01	108	99
	S U S A M 02	196	173	S U S A M 02	155	150

individuals	S U S A M 03	55	49	S U S A M 03	121	114
	S U S A M 01	45	34	S U S A M 03	64	59
				S U S A M 04	11	10
				S U S A M 06	21	21
Felonies and misdemeanors against money and property	S U S A M 01	148	108	S U S A M 01	105	72
	S U S A M 02	181	134	S U S A M 02	176	136
	S U S A M 03	79	62	S U S A M 03	131	97
	S U S A M 04	38	25	S U S A M 04	62	47
				S U S A M 05	14	12
				S U S A M 06	20	15
Felonies and misdemeanors against the family and public morals	S U S A M 01	08	07	S U S A M 01	01	01
	S U S A M 02	08	08	S U S A M 02	04	04
	S U S A M 03	02	02	S U S A M 03	06	06
	S U S A M 04	00	00	S U S A M 04	10	10
				S U S A M 05	00	00
				S U S A M 06	02	02
Felonies and misdemeanors against public objects	S U S A M 01	35	35	S U S A M 01	13	13
	S U S A M 02	26	26	S U S A M 02	14	14
	S U S A M 03	18	18	S U S A M 03	25	25

	S U S A M 04	05	05	S U S A M 04	09	09
				S U S A M 05	05	05
				S U S A M 06	02	02
Total		969	800		1079	923

Source: Information and Communication Cell of the Security of the Province of Constantine, 2018.

S U S A M : short of Urban public Security Ali Mendjeli

## 6.2. - The Jurisdictions of the External Urban Security Units in the New City of Ali Mendjeli - El Khroub:

### 6.2.1-Jurisdiction of S.U Security-01:

**Neighborhood Unit 07:** Includes 05 residential clusters representing a group of cooperative housing buildings, neighborhood 1064 average housing, delineation of neighborhood unit 07.

**Neighborhood Unit 13:** Includes 05 residential complexes, all representing a group of social and cooperative housing buildings.

**Neighborhood Unit 14:** Includes 05 residential complexes, all representing a group of social and cooperative housing buildings.

**Industrial Zone:** Includes both the industrial zone located at the entrance of the new city of Ali Mendjeli and the allocations inhabited by the cooperatives.

### 6.2.2 Jurisdiction of S.U Security-02:

**Neighborhood Unit 01:** Includes 04 residential complexes with a group of cooperative housing buildings as well as (GECO) buildings.

**Neighborhood Unit 02:** Includes 05 residential complexes with a group of social and cooperative housing buildings.

**Neighborhood Unit 03:** Includes the University of Abdelhamid Mehri - Constantine 02, which contains 06 faculties and university institutes, as well as 03 university residences.

**Neighborhood Unit 04:** This unit consists of all buildings containing cooperative housing units, as well as two university residences.

**Neighborhood Unit 09:** This unit includes 04 residential complexes with average housing and social housing units.

### 6.2.3- Jurisdiction of S.U Security-03:

**Neighborhood Unit 05 + Expansion:** Includes a group of cooperative housing buildings, properties, as well as the 150-unit neighborhood.

**Neighborhood Unit 06:** Includes a group of buildings and several neighborhoods (neighborhoods 490, 329, 392, 864, EPLEF neighborhood).

**Neighborhood Unit 08:** Includes 05 residential complexes, all representing a group of residential buildings in various formats.

**Neighborhood Unit 15:** This unit has a variety of housing options in addition to a neighborhood market used for the benefit of the residents of unit 14.

**Neighborhood Unit 16:** This unit includes 03 residential complexes, all representing a group of buildings for social housing.

#### **6.2.4. Jurisdiction of S.U Security-04:**

**Neighborhood Unit 10:** Includes a residential area with private residences, accommodating 4230 individuals.

**Neighborhood Unit 11:** Consists of a military zone housing the regional military hospital and some military functional residences.

**Neighborhood Unit 12:** This unit comprises a residential allocation.

**Neighborhood Unit 17:** Includes two residential complexes, all representing a group of residential buildings.

**Neighborhood Unit 18:** This unit includes 05 residential complexes, all representing a group of residential buildings in social and cooperative formats, as well as (CNEP EMO).

**Neighborhood Unit 19:** This unit includes 03 residential complexes, all representing a group of buildings for social housing.

**Neighborhood Unit 20:** This unit includes 03 residential complexes, all representing a group of buildings for social and cooperative housing.

#### **6.2.5. Jurisdiction of S.U Security 05 (Established in 2017):**

**Neighborhood Unit 18:** After being under the jurisdiction of S.U Security 04, this unit's jurisdiction was transferred to S.U Security 05.

#### **6.2.6. Jurisdiction of S.U Security 06 (Established in 2017):**

The following units were transferred to the jurisdiction of S.U Security 06:

Neighborhood Unit 13, Neighborhood Unit 14, Neighborhood Unit 15, Neighborhood Unit 16.

### **6.3. The Most Important Issues Recorded in the New City of Ali Mendjeli, Constantine:**

The most important cases recorded.	2016	2017
Homicide cases	02	04
Beating and intentional wounding	265	310
Theft cases	284	423

<b>Insulting and cursing</b>	<b>37</b>	<b>45</b>
<b>Infringement of assets</b>	<b>05</b>	<b>02</b>

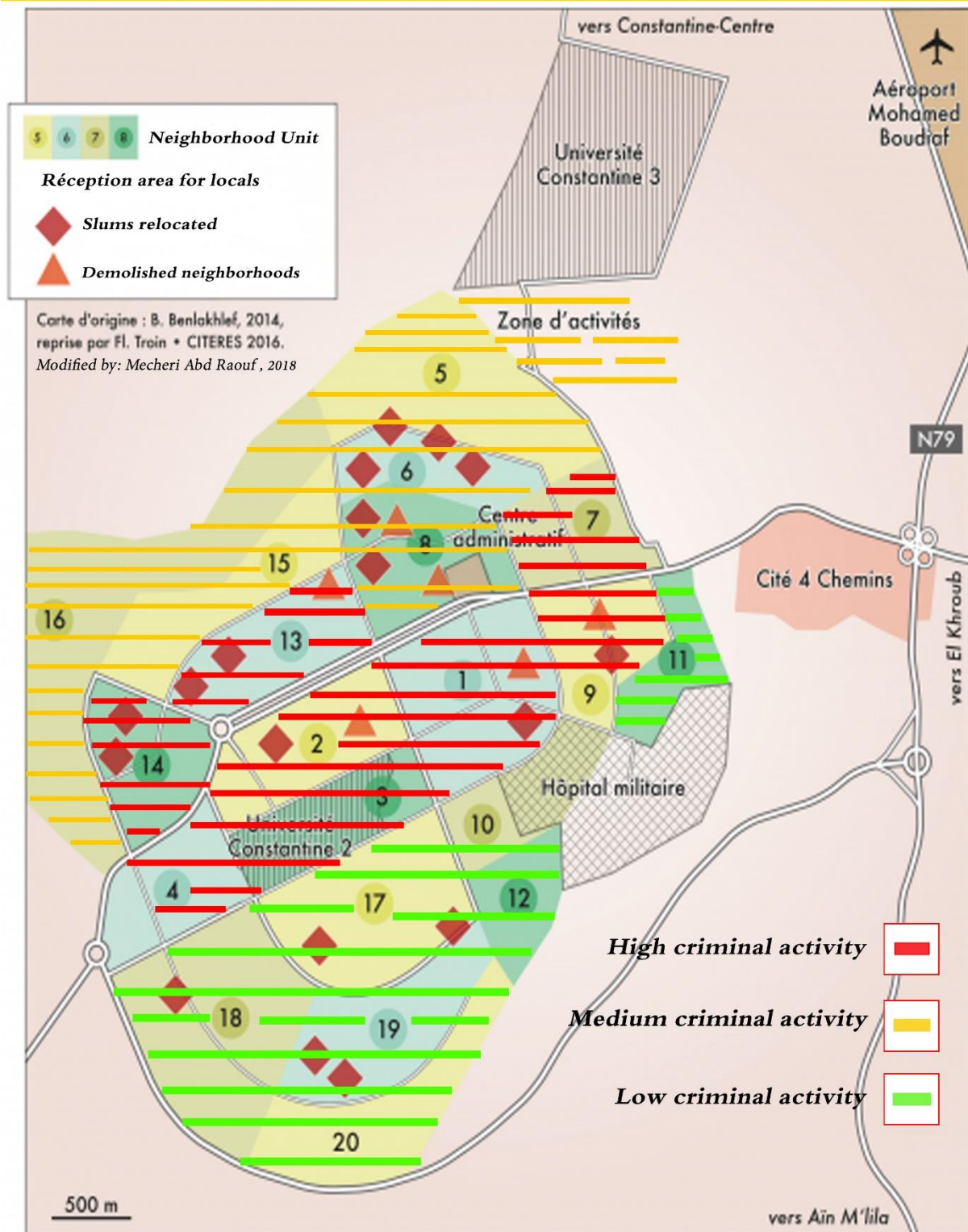
Source: Information and Communication Cell of the Security of the Province of Constantine, 2018.

### 7. Crime Patterns in the New City of Ali Mendjeli

The available statistical data presented in this article, mainly related to the number of recorded cases and those accomplished between 2016-2017, accompanied by statistical departments, allow for the deduction of several facts by linking them to the field, i.e., those neighborhood units that were the source of these cases. Additionally, the attached map below, which originally includes the origins of newcomers to the area of the new city of Ali Mendjeli, allows for the deduction of a set of intersections by overlaying crime statistics on the original map. By comparing the two maps (2016-2017), important differences also become apparent, worthy of discussion. The choice of this map for applying crime patterns was primarily due to its alignment with the statistics used. (See the map).

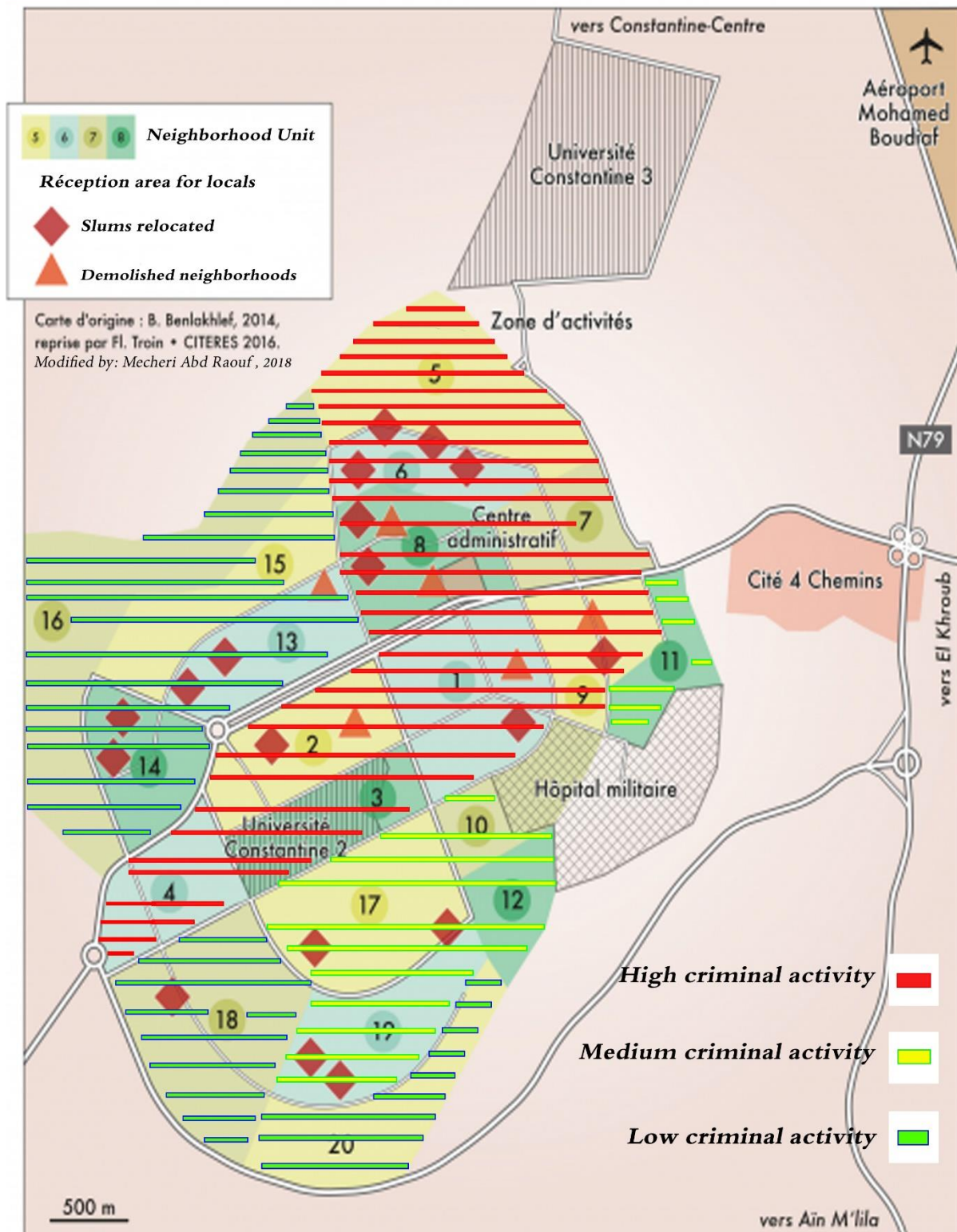
## Map 01

*Division of the new city according to the prevalence of criminal activity for the year 2016*



## Map 02

### Division of the new city according to the prevalence of criminal activity for the year 2017



### 7.1. Recorded Observations:

- The rates of recorded crime in the new city varied from one security department to another.
- S.U.S Ali Mendjeli 2 recorded the highest rate of registered cases in most categories during the years 2016 and 2017.
- The table related to the tally of recorded crimes in the new city of Ali Mendjeli for the years 2016 and 2017 shows fluctuations in the number of crimes, whether recorded or accomplished. This can be explained by the establishment of two additional security departments in 2017, S.U Security 5 and 6, which also recorded a number of crimes within their respective jurisdictions.
- We notice from the same table an increase in the number of recorded crimes in 2017 within the jurisdiction of S.U.S Ali Mendjeli 03, ranking it second. This increase can be explained by the relocation operations witnessed by the neighborhood units belonging to the jurisdictional region during the same period, particularly Neighborhood Unit 16.
- There is an observed rise in the number of crimes of various types between the years 2016 and 2017, which can be attributed to the continuous increase in the population influx to the new city "Ali Mendjeli".
- Theft cases dominate the types of crimes recorded in the new city, followed by cases of intentional assault, verbal abuse, property damage, and homicide.
- The increase in theft cases can be explained by the abundance of vacant buildings and the lack of surveillance, making their owners vulnerable to theft. Additionally, numerous commercial establishments across the city have also fallen victim to theft. Furthermore, isolated incidents have been recorded in various suburbs of the city.
- Assault and intentional injury cases rank second, whether between individuals or groups, often stemming from personal disputes or attempts to assert dominance over certain areas. This was highlighted by the media and communications officer for the security of Constantine province, especially concerning commercial spaces like informal markets and parking lots, which remain subject to ongoing conflicts.
- It's noteworthy that there are other types of crimes, such as drug trafficking and prostitution, which the security authorities haven't included in their statistics, despite their prevalence within the new city.
- The security strategy for the new city undergoes continuous updates, as the national security apparatus seeks to enhance its capabilities to cover the city adequately, in line with population growth and urban expansion.
- These statistics remain valuable sources for drawing relative conclusions, considering that many crimes go unrecorded for various reasons.

### 7.2. Information extracted through the process of crime mapping in the field of study:

- Through the crime mapping process in the study area, we observe a generally high to moderate level of activity in the neighborhoods that received inhabitants from informal settlements, and lower intensity in those neighborhoods that received inhabitants from fragile areas.
- There is a noticeable change in the geography of crime over the two years compared to the two maps.
- The industrial activity area also experienced a decrease in crime in 2017. This can mainly be attributed to the active security patrols in the area and the installation of the

latest cameras, as it houses factories and workshops that employ modern technologies, such as pharmaceutical and semi-pharmaceutical industries.

- The containment of criminal activity in 2017 within the neighborhood units: 13, 14, 15, 16 can be interpreted as a result of the effectiveness of the newly established security strategy, which transformed these units into a new urban security specialization (neighborhood units 6), mobilizing all its capabilities for this purpose, considering that its specialization area was previously considered problematic.
- Urban areas (neighborhood units) where crime is prevalent: According to statistics obtained by the security authorities of Constantine province, the media and communication cell, for the year 2018, which enabled us to uncover the number of crimes (registered and accomplished) for the years 2016/2017, it can be said that crime is prevalent in the new city as a whole but with varying proportions. Neighborhood unit 6 in Ali Mendjeli recorded the highest rate, which includes the specialization area of the following neighborhood units: WJ1, WJ2, WJ3, WJ4, and WJ9. Following it with a lower rate is neighborhood unit 1 in Ali Mendjeli for the year 2016, which includes the following neighborhood units within its specialization area: WJ7, WJ13, WJ14, and the industrial zone.
- In 2017, S.U.S. in Ali Mendjeli 3 recorded the second-highest rate after S.U.S. 2 within its specialization area, consisting of the following neighborhood units: N.U. 5, N.U. 6, N.U. 8, N.U. 15, and N.U. 16. Therefore, the mentioned neighborhood units can be considered the most prevalent urban areas for criminal activity in the new city.

### **7.3. Reasons for the spread of crime in these urban areas:**

- There are several reasons that have contributed to criminal activity within these neighborhood units, which can be summarized as follows:
- Considering the hubs of criminal activity as commercial centers in the new city of Ali Mendjeli, which attract human elements due to the presence of major commercial spaces (such as Ritaj Mall, Ritaj 1...), specialized stores, wholesale and retail food trade, building materials trade (cement, aggregates, ceramics...), furniture, and household appliances trade.
- The S.U.S jurisdiction of Ali Mendjeli 2 can be considered the area with the highest crime rate in the new city for the years 2016/2017, situated in the city center and serving as a main gateway attracting many newcomers and passersby, traversed longitudinally by the tramway track.
- Through a survey study of the area, it can be said that crime-prone areas in the city include within them essential utility and service activities such as postal and transportation services, the Directorate of Promotion and Real Estate Management, mobile service providers, a public hospital, a local health center, a military hospital, and transportation stations within and outside the city... making them areas of daily activity and movement.
- Many neighborhood units that record criminal activity consist of social housing accommodating residents from different areas who may not share common backgrounds or social classes, leading to conflicts and tensions within these areas, as indicated by previous studies (Abderrauof, 2015, p. 207).
- The dynamism of these areas, linked to the activities practiced within them, has made them attractive for opportunistic and persistent informal trades, resulting in conflicts over areas of dominance among individuals and groups.

### **Conclusion:**

Through this applied study, which falls within the framework of a research project with social and economic implications, supported by the Directorate of Scientific Research in 2018, we aimed to present a simple model of crime mapping technique. This involved combining official statistics and distributing them on a spatial map, allowing us to extract elements that may not have been apparent otherwise. It is worth noting that there is no single map that can encompass all variables related to the issue of crime to address multiple and evolving questions.

The digital Geographic Information System (GIS) represents the latest evolution in this technique, with its updated versions. Despite the technique's inclusion in various forms, traditional maps still play a central role in all methods and types of crime analysis, serving as the scientific basis for dealing with its latest patterns. Each police task requires a map tailored to it. Therefore, drawing a map and updating it with additional data and details assists the police in examining each task deeply and objectively, thus enhancing their performance.

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