CULTIVATION OF ILLEGAL WEED IN THE MUNICIPALITIES ALMELO, HENGELO AND ENSCHEDE

Finding explanations for the cultivation of weed

Abstract

The Police are dealing with a growing cultivation of illegal weed in Twente. This study tries to find explanations for this trend by examining possible factors in the municipalities Almelo, Enschede and Hengelo.

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Cultivation of illegal weed in the municipalities Almelo, Hengelo and Enschede

Finding explanations for the cultivation of weed

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Preface

After an intensive, informative and above all fun period of several months, the time has come to not only finish my thesis, but also the study Public Administration. By writing this word of thanks I put the final touches on my thesis. It was a period in which I learned a lot, in the scientific field, but also on a personal level by gaining a great new network of people. Therefore, I would like to reflect on the people who have supported and helped me enormously during the past period.

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Dear all, thank you very much!

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Abstract

The growing cultivation of illegal weed is a problem for the police in Twente. The production, trade and smuggling of cannabis in Twente goes hand in hand with an extensive combination of negative consequences like public health hazards, financial damage and different forms of undermining like the interweaving of the upper- and underworld. The task of the police is to act preventive and repressive against the production of weed, therefore 237 plantations were rolled up in Twente with an average of 313 cannabis plants in 2016. However, it is suggested that only 10% of all plantations is being found, which means that there are around 2.300 active plantations in Twente.

In the search for an effective policy, the police are interested in factors that might be the cause of these weed plantations in Twente. This research will contribute to that search and aims to explain the amount of weed plantations in the three biggest municipalities in Twente: Enschede, Almelo and Hengelo. This will be done by analyzing various variables (factors) given by relevant actors and crime theories. These factors are the social and unemployment benefits, the western and non-western ethnicities, the border (with Germany) and presence of a guardian. Bivariate correlation tests will be used to compare the values of these factors with the number of plantations on a district level within the three municipalities.

For the municipality of Enschede, this research has shown significant relationships with the social benefits and non-western ethnicities. However, both the municipalities Almelo and Hengelo showed significant relationships on social and unemployment benefits. The difference between the municipalities becomes even greater when looking at the ethnicities. In contrast with Enschede, Almelo showed a significant relationship with both western as non-western ethnicities while Hengelo scores insignificant on both. Analysis regarding the border shows a significant correlation between the distance to the closest border and the plantations in all the fourteen municipalities in Twente. Analysis of guardianship indicates that community officers potentially enhance the repressive role of the police in Enschede, finding more plantations when the number of officers also increases. Moreover, it is also indicated that an increase of notifications by civilians is positively connected to the increase of plantations that are being found. The results of this research showed that various factors influence the number of plantations. However, it seems that the differences between the municipalities also suggest that other unknown factors could be present. It is therefore recommended to investigate the municipalities in more inductive way.

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I - Introduction

The Dutch National Police Force, Regional Unit East, district Twente is confronted with a growing number of illegal weed plantations (*hereafter 'weed plantations', 'cultivation of weed' or just 'plantations'*) in the region of Twente. The Tubantia, a regional paper in Twente is referring to a shadow economy in which the weed plantations are providing an annual turnover of 453 million euros. Most of the profits end up in the pockets of criminals who are in the top of the figurative pyramid and are rarely tackled by the judiciary. Based on research of the Tubantia, only a fraction of the money ends up with the people who homegrown the plantation. In many cases these people are vulnerable and run the risk of a conviction for only a few thousand euros per harvest (Tubantia, 2017).

In 2016, 237 of these plantations were rolled up in Twente, with an average of 313 cannabis plants (Tubantia, 2017). According to the report 'Nationaal dreigingsbeeld 2017' 10% of the plantations is being found. This should mean that Twente will have more than 2.300 active plantations. The police stated that the clear majority of weed in Twente is sold abroad. Therefore, Harry uit het Broek, head of the criminal investigation department, stated that legalizing weed plantations could solve the problems for coffee shops, because they can buy their goods legally. However, Uit het Broek stated that it is a utopia to think that legalizing weed plantation will reduce or stop the illegal weed on market.

Moreover, not only the police, but also the housing cooperation's, the judiciary, the electricity network administrators and the municipalities have tried to prevent the growing number of weed plantations in Twente. In 2014, an agreement concerning the weed plantations was made due to a so-called weed covenant (RTV Oost, 2016). The core of the agreements was a strict policy on tenants who grew weed in the rented houses and had to leave their house when caught. In the following years, dozens of tenants had to leave their homes because of this policy.

To develop a more effective strategy, the police department East, district Twente, wants to investigate what factors in Twente are causing the high number of weed plantations in the most populated municipalities in Twente Enschede, Hengelo and Almelo, where most of the plantations are being found. For the police to develop this strategy, more current knowledge about the weed plantations and the municipalities is necessary. Therefore, the following research question has been formulated:

'What explains the amount of weed plantations in the municipalities Enschede, Almelo and Hengelo based on the view of relevant experts, theories and quantitative data?'.

Goal, Purpose & Sub questions

This study has been done for the police department in the region of Twente. The goal of this study was to find factors that explain the amount of illegal weed plantations in the three municipalities. This study may contribute to the development of a new effective policy against the cultivation of illegal weed. Although there is a lot of research on illegal weed, its distribution and the plantations itself, this research raises the specific questions about what factors influences the amount of a weed plantation in the municipality of Enschede, Hengelo and Almelo. The reasons for choosing the municipalities Enschede, Hengelo and Almelo are that these three municipalities are the most populated municipalities in Twente and have the highest number of plantations of all municipalities in Twente. Therefore, this study will focus on answering what influences the amount of weed plantations in these specific municipalities. In order to give an answer on this, multiple sub-questions have been stated:

1. *What are the facts and figures on the cultivation of weed?*
2. *What are the perspectives by relevant actors on this social problem?*
3. *What are the theories about the cultivation of weed?*
4. *Which factors correlate with the number of plantations?*

Reading guide

Based on the conclusions of the first three sub-questions, four factors have been chosen for analysis in sub-question four. The operationalization of these factors will be described in chapter II. In chapter III, IV, V and VI the sub-questions will be answered. First the facts, figures and numerical information about the cultivation of weed are given in chapter III. Chapter IV contains the perspectives of the actors that have been interviewed in order to understand the social problem in Twente even better. The theories that could explain the cultivation of weed are described in chapter V. Chapter VI includes the analysis of the factors followed by chapter VII and VIII (conclusion and discussion).

II - Operationalization

This study has focused on four factors that originated from conclusions of the first three sub-questions. These conclusions allowed further elaboration and hypothesis creation on a subject. Based om the different perspectives given by the actors and the theories in chapters III and IV, various factors have been appointed as possible influencers of the cultivation of weed. These factors have been described below:

Factors

Factor 1: '*The number of inhabitants that receive social or unemployment benefits in the municipalities Almelo, Enschede and Hengelo'.*

Factor 2: '*People with a non-western & western migration background in the municipalities Almelo, Enschede and Hengelo'.*

Factor 3: *'The distance to the border for the 14 municipalities in Twente'.*

Factor 4: '*The presence of a guardian in the municipalities Almelo, Enschede and Hengelo?'*

Research design

This study has an explanatory research design. The goal of explanatory research is to better understand causal relationships. Quantitative data has been used to test whether the indications (the factors) of the crime theories and the view of the actors work in the real world, in this case in the municipalities Enschede, Hengelo and Almelo. Also, this study has analyzed the districts (total 32) in the three municipality. The districts of the municipalities are the research units (n) and have been tested by bivariate correlation tests. There are two reasons for this choice. The first reason is that only (recent) information about the districts is available and the second reason is that every district is unique and an explanatory cause in district A does not have to be the same as in district B. The reason is that there a numerous different variables per district that might cause cultivation of weed. Therefore, the chosen districts are to be studied in a more inductive way. Only factor 3 will use the fourteen municipalities as research unit duo the nature of the question.

Data collection

To obtain information about the different factors, two different methods of research have been used. Data is gathered by means of interviews with various actors to indicate multiple explaining factors. Next, numerical data about the number of plantations are received from the police systems BHV (Basisvoorziening Handhaving) and Bluespot. Information about the social assistance, unemployment and ethnicities originate from CBS (Centraal Bureau voor de Statistiek) and the municipality (Kennispunt Twente). Information about the number of community officers is gathered by using the main police website and the distance to the border is measured by using google maps. The results are a collection of qualitative data to first obtain a broad view of the problem and statistic data such as percentages and numbers for the analysis. These two methods are described in detail below.

Interview data

Preventing illegal weed plantations is the task of multiple actors. Therefore, it was decided to conduct in-depth interviews with various actors with different backgrounds. The purpose of using interviews was to get a broad and specific view of most factors that explain the number of plantations in the municipalities. The interviews are conducted with actors who are (operational) experts and have deal with the problem like police officers, municipal staff or energy suppliers. The aim was to interview at least five different specialists to achieve a valid answer (in total seven have been interviewed). The goal was to acquire a wide range of different insights to understand the problem and the how it is tackled to understand the problem, the different causes and the current approach of the problem. The interviews were done in a semi-structured way. This means that the interviews have been conducted by making use of (only a few) topics with space to ask in-depth questions. The list with topics can be found in the appendix. Names of the persons are not being mentioned in this research for privacy reasons.

Numerical data

To obtain the amount of registered and reported weed plantations in the districts of Almelo, Hengelo and Enschede, the BHV and Bluespot system have been consulted. Data about the plantations, like the specific location of the planation, have been obtained by these systems.

In BHV and Bluespot, weed plantations can also be selected based on the year and location. According to the Opium-law (Opium wet), cultivation of weed is prohibited (list II of the Opium-Law). However, if a person is in possession of five or fewer hemp plants (and no 'professional or commercial conduct' is in place), no action will be taken against that person.

Therefore, registration of weed plantations will, in most cases, take place when six or more plants are uncovered. The police registers drug incidents into several classes. The cultivation of weed is classified in BHV as F45, which means the manufacture of soft drugs. The aim was to obtain information over the years 2015, 2016 and 2017 and it was decided to use the police system to map the illegal weed plantations because these registrations and reports give the most accurate numerical data that is available. The number of registered plantations and notifications are calculated by linking the postcodes of the registered plantations and notifications to the postcodes of the districts. In some cases, a registered plantation or notification did not have a corresponding postcode and are therefore not been used.

The police data will be supplemented with data from other sources like CBS. To show an overview of the number of social assistant and non-western ethnicity, various sources have been used. First, data from the CBS and Kennispunt Twente were collected. These sources gave the most accurate numerical data that is available through common desk research. Again, the aim was to obtain information over 2015, 2016 and 2017. This data is used for measuring and comparing. Data in this research is displayed in multiple ways. A number per 1000 habitants gives the number of social and unemployment benefit. The ethnicities are given by a percentage of the total population in a district. Data about the border is measured by google maps. All fourteen municipalities in Twente are displayed in in terms of distance to a nearest border with Germany. Information about guardianship is displayed in terms notifications that are being received (by citizens, policework and remaining) per district and how many community officers are linked to the district. A police officer will be divided when he/she is signed to multiple districts.

Analyses

The numerical data of the police focused on the number of weed plantations in the municipalities in 2015, 2016 and 2017. These numbers are compared to other data when it was possible to do so. It is likely that numerical data of plantations did not fully correspond with reality. This may have to do with the fact that different police teams can register weed plantations differently (the police in Enschede uses, for example, the F45) or data was simply not complete. Despite the possible differences, this was the best available way to give an indication of the size of the problem in the municipalities.

Numerical data about social assistance and non-western ethnicities is analysed by making use of SPSS. First, data of the most recent year is analysed to give a clear overview of the values of each district. The aim was to find correlations (bivariate analysis) between the number

weed plantations and the corresponding variables (values) in each district by making use of Spearman's rank correlation coefficient (or Spearman's rho). The distance between district and the border is analysed by making use of SPSS. Information about guardianship will be analysed in terms of number of police officers in a district and how notifications are being received. Last factor says something about the investigation of the police. When only citizens report plantations, it could mean that the police have a limited role in detecting these plantations. Furthermore, the interviews with different actors also contained side-questions about the current approach and registration.

By linking the interview data and the theories from the literature to the outcome of the numerical data, it is examined whether the theory and the image that experts have about the possible causes of illegal weed plantations matches the outcome of the numerical data. In fact, the literature and the view of the actors are tested through the numerical data. This way, a conclusion has been given about the possible explanations of illegal weed plantations.

Validity and reliability

Three criteria form the internal quality of this study: construct validity, internal validity and reliability. Construct validity means that the variables that are being described in the statements of the theoretical framework have a correct interpretation of the empirical phenomena for which they are being used. In this case, starting a weed plantation is a crime. Therefore, various crime theories and perspectives of expert have been described that produced multiple factors why a person would set up a plantation. In other words, this study measures what it claims to be measuring. Internal validity means that the relationships between different concepts should also be a correct interpretation of the correlations between the phenomena that have been found. Most of the criminology theories in this study have been researched by using quantitative studies. Therefore, the conceptual criminology theories do have a relationship between the studied phenomenon and its backgrounds.

Reliability means that the statements must be based on accurate observation of reality and cannot be traced back to accidental circumstances in it measuring instruments or the examined units. In this study, multiple interviews are conducted and the same questions (from the theory) have been asked to the actors. This way, reliability in this study is partly present but submerged because it deals with qualitative research methods in which are reliability remains doubtful. However, the numerical data are based on reality and ensure reliability.

This study could be generalized to other districts outside the specific municipalities because all different districts in the municipality of Enschede, Hengelo and Almelo have been examined. However, results in this study are only based on correlations, not causal relationships. Therefore, external validity is not fully present because other factors could have an influence as well.

III - Sub Question 1: Facts and figures about the cultivation of weed

This sub-question contains background information about the cultivation of weed, its facts and related problems in the Netherlands and Twente. The three municipalities that have been researched will be briefly described and numerical information is given to indicate the scale of this social problem in these municipalities. At the end of this chapter, a resume of the problem is given. The information for this section is based on two reports about the national threat in the Netherlands ('Nationaal dreigingsbeeld' report 2012 and 2017). Information in the 2012 report is based on the reports 'Georganiseerde hennepteelt, Criminaliteitsbeeldanalyse 2012' and 'De rol van Nederland in de internationale hasjhandel, een quickscan' both by F. Jansen. Most information in the national threat report of 2017 originates from the confidential report by Theunissen & Vaes, both working at the police. For more detail it is recommended to read these sources (if available). For this report, references are mainly from the sources 'Nationaal dreigingsbeeld, 2012' and 'Nationaal dreigingsbeeld, 2017' both by Boerman, Grapendaal, Nieuwenhuis, & Stoffers, but will be supplemented with other sources. The main part of this section deals with the production of Dutch (also Twente) - grown weed and its facts. The import of foreign weed has not been investigated and is not taken into account.

Cannabis & Consumption

The cannabis market is dominated by Dutch cannabis. In cannabis production, trade and smuggling, a distinction is made between weed and hash. Hemp (Latin name: cannabis) is a plant from which cannabis (marijuana) and hash can be made. In the case of weed, only the green-brown tips of the (female) plant are being used. For hashish, only the resin of the tips is being used. The main active ingredient of both hash and weed is tetrahydrocannabinol (THC) (Politie A, 2017). According to the National Dreigingsbeeld, 2017, cannabis is by far the most commonly used illegal drug in Europe. More than 22 million adults used cannabis in 2015 and 1% of European adults uses cannabis daily. The National Drug Monitor[1] (2014) shows that 8% of the Dutch population aged 15 to 64 years of the previous year had recently used cannabis and 4.6% the previous month are active users. Compared with the European average, the percentage of recent and current cannabis users is slightly higher in the Netherlands. Only Spain (9.2% recent and 6.6% active) and France (11.1% recent and 6.6% active) score higher than the Netherlands. Among the school youth (15 and 16-year olds) the percentage of current users is relatively high with 27%. Only in the Czech Republic (42%) and France (39%) this

[1] National Drug Monitor, jaarbericht 2014, page 56.

percentage is higher. Estonia (24%), Latvia (24%), Spain (27%), Slovenia (23%) and Poland (23%) come close.

The estimated average annual consumption per cannabis user in the Netherlands is 69 to 93 grams. Weed grown in the Netherlands is by far the most favourite cannabis variety. The total consumption of cannabis grown in the Netherlands in 2012 and 2013 is estimated at an amount between 28 and 119 tons.

Cannabis & Production

According to the report 'Nationaal dreigingsbeeld 2012', the total production by Dutch plantations is estimated based of available information and assumptions about the chance of being caught, the yield of a weed plant and the number of harvests that can be realized annually per farm. The Platform Network Operators estimates that 25,000 plantations are active annually. Since 2007, around 5,000 of these cannabis plantations have been dismantled by the police every year. In 2011 there were 5435, and a total of 1,764,709 weed plants were confiscated. On average, that is 325 plants per plantations with one plant delivering around 28 grams, which is around 90 euros (Hennepadvocaat A, 2017). However, other studies like the one of Vanhove (2014) showed that this amount is on the low side due to new techniques that are continuously being improved but this is not considered in this report. A plantation can be harvested three to five times on an annual basis (average of four) according to Jansen (2012). The probability of a premature discovery of the harvest, the chance of being caught, is 4 to 21% (average 10%) (Jansen, 2012).

Furthermore, energy consumption can also say something about the production. The number of dismantled plantations, on the other hand, are not the only indicators for production. The number of dismantled plantations says more about the police capacity. In the period 2012-2015 the number of dismantled plantations is between five and six thousand. The 'Platform Energiediefstal' (Energy Theft Platform) estimates the number of plantations based on the amount of stolen energy. In 2014, that was 1 billion kilowatt hours (Netbeheer Nederland, 2015). With that quantity (with an average annual consumption of 35,000 kilowatt hours per plantations) there can be around 30,000 active plantations in the Netherlands. That would mean that about 20% of all plantations are being found. However, this calculation does only assume cultivation of weed as theft. Therefore, given both calculations, there can only be a rough estimation on how many active plantations there are in the Netherlands.

The report 'Criminaliteitsbeeldanalyse 2012' (CBA) from 2012 (Jansen, 2012) and the WODC report from 2014[2] have also assumptions about the estimated production, consumption and export of cultivated weed in the Netherlands. These assumptions consider the yield per plant, the number of plants, the number of crops harvested per year and the chance of being caught. In these assumptions, three scenarios arise: a low, medium and high scenario. Table 1 summarizes the results of both studies and displays only the low and high scenario. Given the margins, both estimates vary relatively little. The large margins are due to the unreliability of the available records and the uncertainty about the accuracy of the assumptions. In short, the estimates are with so much uncertainty that hardly any conclusions can be drawn from them (Boerman et al. 2017).

Table 1. Estimated production, consumption and export of Dutch cultivated weed in tons.

	CBA 2012	WODC 2014
Production	187 – 1.196	171 – 965
Consumption	33 – 97	28 – 119
Export	90 – 1.163	53 – 937

Source: CBA, 2012, and WODC, 2014

Many of the studies on the production of cannabis are also focused on identifying different 'type' of growers, making it possible to make a distinction between several typologies and their reason for cannabis production. An article of Weisheit (1991) displays three different types of growers. The Hustler, does it because of the challenge, often on a large scale; the Pragmatist, does it out of economic necessity, size differs; and the common grower, cultivation for own use but may become larger for economic reasons. Other authors like Decorte, Potter, & Bouchard (2011) are in favor for making a distinction between growers who are doing it for financial gain and growers who do it for other reasons like a medical gain. However, many more typologies are possible.

[2] Wetenschappelijk Onderzoek- en Documentatiecentrum (WODC), De export van in Nederland geteelde cannabis 2014, page 132.

Toleration of cannabis

Owning or growing hemp plants is prohibited according to the Dutch Opium Act. However, if a person is in possession of five or fewer hemp plants (and therefore no 'professional or commercial conduct' is in place), no action will be taken against that person (Politie B, 2017). For 'home-growers' with five or less plants, no criminal prosecution will be applied based on the PPS (Public Prosecutor Service) guideline. This also applies to the possession and therefore the transport of small amounts of cannabis, up to five grams (Politie B, 2017). However, owning or growing these plants are still prohibited and punishments can be a fine (around 1000 euros) or community service (120 / 180 hours) with one-month conditional imprisonment when more than five plants are discovered (Hennepadvocaat B, 2017). For 'home-growers' with five or less plants, no criminal prosecution will be applied based on the PPS (Public Prosecutor Service) guideline. This also applies to the possession and therefore the transport of small amounts of cannabis, up to five grams (Politie B, 2017). However, larger quantities are not allowed. Storing weed often occurs in grow shops or coffee shops itself (Jansen, 2012). A coffee shop may have a stock of 500 grams and the storage of larger quantities is therefore prohibited. Here there is room for involvement of estate agents or property traders. They have vacant properties and this way they can provide the growers with a storage space, which in practice appears to be common (Snippe, Mennes, Sijtstra, & Bieleman, 2017).

Types of cultivation

Korf, et al. (2005) distinguishes two main categories of illegal cultivation. First the home dealers and second the mobile 'shops' who deliver drugs to others. The home growers are often financially dependent on criminals/criminal organizations, like grow shops. These independent growers work for their own account and risk, growing in-house and they sell weed to various buyers (Politie A, 2017). The second group are the operators. They are often part of criminal organizations. They use managers to run the plantations. This way they remain out of the picture themselves. Operators are often involved in other criminal activities such as theft, burglary, production of and trade in hard drugs, firearms trade and smuggling, mortgage fraud, identity fraud and human trafficking (Politie A, 2017).

Developments

According to the 'Nationaal dreigingsbeeld 2017' report, a range of topics can be mentioned when it comes to the development of the cultivation of weed in the Netherlands. For example, moving plantations to other countries is not a new trend, but this displacement is becoming more common. Not only the neighbouring countries Belgium and Germany are affected by this, even Spain and France have plantations that have been set up with Dutch materials, with the help of Dutch knowledge or which are run by Dutch criminals. In Belgium, for example, 90% of the plantations have a Dutch involvement.

In the past, supplies to set up a plantation were purchased mainly from grow shops. Article 11a of the Opium Act makes these business activities punishable since March 2015. Since the introduction of article 11a, several grow shops have been closed. In practice, however, it appears that many grow shops are still active. They adapt to the new legislation and sell different goods from different locations, make use of internet and by omitting registrations. Therefore, growers still have (online) access to the required supplies. However, it seems to be harder to get these necessary materials into the Netherlands and that is why they are also brought from abroad, for example, transports from Germany are regularly intercepted.

To grow cannabis in an ideal climate, a commonly used climate control system is the OptiClimate. This is a water-cooled air conditioner that can be controlled. The system can dehumidify, filter and circulate hot and cold air. This is where the ideal grow climate is achieved. In addition to controlling the climate, the system also provides automated growth features. For example, water and power supplies are automatically added. The plantations are self-regulating. The process gets up with cameras with a check once every four to five days by a person who visits the plantations. Climate control systems are becoming increasingly common, large plantations often have several. The price for a device ranges from 2000 to 6000 euros. Also, devices are being placed to regulate the CO2 in the air. Benefits of growing with CO2 are shortened grow time and increased harvest by 20 to 40%. Furthermore, the growing lights are getting better as well. It concerns lamps that are being used in professional gardens. A final development is the use of scents. By adding a certain scent to the plantations, the smell of weed is masked. This smell can also be covered with ozone devices. Ozone is a natural air purifier, but harmful when inhaled for long periods of time. The past few years sporadic ozone settings have been found in the plantations. Also, plantations are cleaned thoroughly between two growing periods more often. Traces of earlier harvests are erased as much as possible. Criminals want to prevent previous harvests from being shown, because with a possible deprivation, the illegally obtained benefit is calculated and previous harvests

do count. That is why criminals wash their materials or replace them, they place new cloths around the carbon filters and dust them off. All these measures indicate a certain trend of professionalization. As a result, the quality of weed in many European countries has increased as well. A consequence of this trend is that the demand for imported weed in several countries has decreased. These countries can now provide themselves.

Consequences, health, financial and crime

The 'Nationaal dreigingsbeeld 2017' report of also displays a wide range of consequences as result of these plantations and the consumption of weed. The use of cannabis causes various health risks. There is evidence that use of cannabis increases the risk of a later psychotic disorder. This risk increases when cannabis is used in a high frequency. Between 6 and 10% of all new cases of psychotic disorders are linked to cannabis usage. Chronic and heavy cannabis use is also associated with other health risks. It probably increases the risk of respiratory complaints and lung cancer. In addition, cannabis use appears to be an indicator of weak psychosocial functioning. This is related to all kinds of other factors such as cigarette smoking, use of alcohol or hard drugs, truancy and poor school performance. Although cannabis is less addictive than many other types of drugs, it takes the risk of becoming addictive in case of prolonged frequent use. The addiction treatment offers help to people who have become addicted to drugs, alcohol, medicines, gambling or other behavioral addictions. The 'Landelijk Alcohol en Drugs Informatie Systeem' (National Alcohol and Drugs Information System) (LADIS)[3] contains anonymized information about this treatment. This information shows that the number of clients registered because of a primary cannabis problem between 2005 and 2014 has become twice as large. Since 2011 the number of cannabis clients are reasonably stable, and the number is about 11.000 per year. The number of clients who call cannabis as a secondary problem fluctuates around 5.300 per year. The share of cannabis in all requests for assistance regarding drug use is also increased over the years. In 2005, 17% had cannabis-related requests for help. In 2011 this percentage increased to 33%. Since then it has remained stable.

There are also negative financial consequences in various areas due to large-scale cannabis cultivation. This often results in damage to the buildings in which a plantation is located. According to the 'Nationaal dreigingsbeeld 2017' report, each year hundred buildings are registered because of damage by fire or leakage due to a plantation. However, the registration of this data is not complete, so it must be assumed that this is number is the minimum. The

[3] Landelijke Alcohol en Drugs Informatie Systeem (LADIS); www.ladis.eu/nl/middelen/cannabis

construction of a building can also be affected by the materials and the climate control system which can cause moisture and rust in the houses. In addition to serious damage to buildings, the fires also endanger people, both persons involved in the crime and the surrounding neighbors. Another financial loss concerns energy theft. Like stated before, according to the Energy Theft Platform, there are more than five thousand energy thefts every year. The vast part of this concerns weed plantations. In practice, in almost all weed plantations there is a manipulated power supply. It is estimated that 1 billion kilowatts of electricity stolen. This is approximately equal to the annual energy consumption of households in a city like The Hague and this represents a value of almost 200 million euros. The banking sector also suffers damage because of organized weed cultivation. Criminals use false data such as false identities to obtain a mortgage and often the financial obligations are not fulfilled. Last, the costs of addiction care for the estimated 11.000 primary cannabis clients are tens of millions of euros per year.

Based on the general police website, criminal organizations make huge profits with the illegal cultivation of weed. In this progress, they do not shun violence, extortion, corruption and even liquidations. The 'Nationaal dreigingsbeeld 2017' report, also shows that use of (extreme) violence in the cannabis sector has increased the last three years, both within criminal organizations and between criminal organizations. Research by the EMCDDA[4] and Europol shows that in the period from 2013 to 2015 a total of 85 liquidations and 13 attempts took place. In ten cases there was probably a conflict in relation to cannabis crime. This involved five successful liquidations in 2013 and five in 2014. In addition to the number of deaths as a result of a liquidation, there are also persons who are missing because of a conflict in the cannabis industry. Money that criminals earn from illegal weed cultivation is often invested in real estate, luxury goods and in 'normal' activities such as sports clubs in the Netherlands (Politie C, 2017). A case study of Tops & Van der Torre (2014) concluded that specific types of housing are also attractive for offenders. Older and badly maintained houses can be bought for cheap and can be used for criminal activities. Therefore, weed plantation are more likely in depressed districts (Tops & Van der Torre, 2014). Also, the number of independent business owners and weed operators seems to be increasing with no real explanation other than it is a fast and relatively easy way to earn money (Politie C, 2017). Crime companies engaged in the production of weed often manage several plantations which means that they organize the cultivation process, arrange supervisors, manage staff and process and sell the

[4] European Monitoring Centre for Drugs and Drug Addiction; Rapport over de drugsmarkten in de EU, Strategisch overzicht 2016.

harvested weed (Politie C, 2017). The underlying conflicts usually have their origin in missed or fault income from parties that have been ripped by competitors or have been confiscated by the government. Moreover, the liquidations (or attempts) are still increasing in public spaces. These alarming signals mean that the approach of weed cultivation is high on the agenda of the police (Politie C, 2017).

According to Bieleman, et al. (2009) there are municipalities that have problems with illegal sellers and buyers (drug runners), especially in the border areas. This concerns parking and traffic problems caused by young people hanging around. Especially in border municipalities there is traffic nuisance, often caused by drug tourists from Belgium, Germany and France who come by car. The drug runners who are active in the border municipalities are in most cases of men with an immigration background (especially Moroccan).

A last concept worth mentioning in the 'Nationaal dreigingsbeeld 2017' report is the presence of undermining. The production, smuggling and trade of cannabis can lead to the undermining of Dutch society. There are cases of influencing the rule of law and public administration. Examples are police officers who are paid to pass on information to criminals or municipal officials that unjustly grant permits. Criminals also tried to exert influence by intimidating or threatening people. A common form of undermining is the interweaving of the lower and upper world. There are situations in which criminals from the weed branch tried to join local politics.

Expectations

The 'Nationaal dreigingsbeeld 2017' report of also displays certain expectations for the period 2017-2021. The entire cultivation process can take place almost entirely automatically. This limits the number of people involved. The chance that the police will dismantle a plantation or that competing parties will rip a plantation will become smaller. The equipment is easily available. The expectation is that the application of this type of technologies will continue to increase. Also, the internet is increasingly playing a role in weed cultivation and trade. The prohibition in 2015 on supplies via grow shops led to a more important role for the internet. Knowledge and supplies can be obtained via the internet and there is little insight into what is on the internet. This makes it a relatively safe trading place for criminals.

Weed plantations use a lot of electricity, which is generally stolen. Network operators have now introduced the smart meter. The arrival of the smart meters can influence the way in which the power supply is manipulated. Manipulating a smart meter is more difficult than

manipulating a traditional meter. There is a higher chance that branching will take place for the meter, instead of manipulating the meter itself.

Immigrants constitute a vulnerable group among migrants. They do not speak the Dutch language; often do they not have their passports and they are financially dependent on others. This vulnerability is used by criminals. For example, at the entrances of asylum seekers centers refugees have been recruited to carry out activities in weed cultivation. Due to the large number of migrants it is assumed that this vulnerable group will increasingly become the victim of such practices.

The municipalities Almelo, Hengelo and Enschede

The region of Twente consists of 14 municipalities with the most populated municipalities being respectively Enschede (158.000) Hengelo (80.000) and Almelo (72.000). In addition to the city of Enschede, the municipality of Enschede also include the villages of Lonneker, Boekelo, Usselo and Glanerbrug. Enschede is the largest city (but not the capital) of Overijssel. Enschede is also located only a few kilometers from the Dutch-German border. The nearest place in the west is Hengelo and the nearest town in the east is the German town of Gronau. Until the 1970s, Enschede was one of the centers of the European textile industry. After the disappearance of the textile industry, many jobs, knowledge and machines were lost (Enschede onze stad, 2018). According to the Kennispunt Twente (2018), around 112.000 inhabitants are autochthonous, the other 46.000 (around 29%) has a non-western (16%) or western background (12%)[5]. The average income per person is €20.300 (€24.100 average in the Netherlands) with a percentage of unemployment of 7.1% in 2017 (4.9% is average in the Netherlands). Notable is the density of social assistance in Enschede with 66 on 1.000 inhabitants having a social benefit in 2016 (36/1000 is average in the Netherlands). Moreover, the percentage of low(er)[6] educated people is also higher in Enschede (23%) than the average in the Netherlands (21%) in 2017.

[5] See table 2 for the distribution of ethnicities in Twente and the Netherlands. According to CBS, the ethnicities can be distributed in different categories. The main categories are: western ethnicities, non-western ethnicities and indigenous people. Western ethnicities consist of inhabitants with origin as one of the countries in Europe (excluding Turkey), North America, Oceania, Indonesia and Japan. Non-western ethnicities consist of residents with a migration background from Turkey, Africa, Latin America and Asia except for Indonesia and Japan.

[6] CBS and Kennispunt Twente define a 'low level of education' as when someone completed their entire primary education and the first phase of secondary education: lbo / vbo / vmbo, mulo / mavo, the first three years of havo/vwo and the lowest level of vocational education.

Table 2. Distribution of ethnicities over 2015-2017 in percentage

Population of	2015	2016	2017	Population of	2015	2016	2017
Enschede	100%	100%	100%	**Almelo**	100%	100%	100%
Autochthones	72%	71.8%	71.4%	Autochthones	75.3	75.1%	74.8%
Western	12.7%	12.5%	12.4%	Western	9.9%	9.9%	10%
Non-western	15.4%	15.8%	16.2%	Non-western	14.8%	15%	15.2%
Hengelo	100%	100%	100%	**The Netherlands**	100%	100%	100%
Autochthones	78.4%	78%	77.6%	Autochthones	78.3%	77.9%	77.4%
Western	9.7%	9.7%	9.6%	Western	9.6%	9.8%	9.9%
Non-western	11.9%	12.3%	12.8%	Non-western	12%	12.3%	12.7%

Source: CBS D, 2018

With 72.000 inhabitants, the municipality of Almelo is the third populated municipality in Twente. In addition to the city of Almelo, the municipality also includes the villages Aadorp, Bornerbroek and (partly) Mariaparochie. Just like Enschede, Almelo has had many textile factories especially last century. In 2012, this ended with the closure of the last weaving mill of Ten Cate (Gemeente Almelo, 2018). According to Kennispunt Twente (2018), Almelo consists of 54.000 autochthonous inhabitants. The other 18.000 consist of western (10%) and non-western ethnicities (15.2%). The average income in Almelo is €20.400, more than in Enschede. The percentage of unemployment is 6.5% and the density of social assistance is 61 on 1.000 inhabitants. Of all the three municipalities, Almelo has highest percentage of low educated people (25%).

The municipality of Hengelo is the second most populated municipality in Twente. The city of Hengelo consists the largest part of the municipality. In the southern part of the municipality lies the village of Beckum. In addition, the villages Woolde (largely) and Oele also part of the municipality. Hengelo is the fourth city of Overijssel after Enschede, Zwolle and Deventer. In contrary with Enschede, Hengelo is often seen as a (former) industrial city due to the large metal industry of the past. Still, large electrotechnical and chemical companies have traditionally been established in Hengelo (Gemeente Hengelo, 2018). Given the information of the Kennispunt Twente (2018), Hengelo consist of 62.000 autochthonous inhabitants, 18.000 non-western (12.8%) and western inhabitants (9.6%). The average income is €22.100, the percentage of unemployment 5.2% and the social assistance is 44 on 1000 inhabitants. Moreover, Hengelo (20%) has less low educated people than average. Given the data of the three municipalities, Hengelo is the most average scoring municipality based on demographic and social characteristics. Almelo and Enschede score lower and (almost) equal.

Police and municipal approach in Twente

Like stated before, the cultivation of weed has the priority of the police. For the police to tackle illegal weed plantations, a plantation must be discovered first. This can be done by police patrol, but also by MMA or additional notifications [7]. MMA stands for 'Meld Misdaad Anoniem', which means anonymously reported crime. In case of illegal weed plantations, citizens that may have suspicion report to the police anonymously. Table 3 displays the categories of notifications in Twente, and highlights the municipality Almelo, Hengelo and Enschede over 2015, 2016 and 2017. Table 3 shows that police notifications are only a small part of all notifications, which indicate that the police are dependent on civilians or connections with other (government) organizations to find the plantations. The police in Twente have a specific coordination team based on these weed notifications. This team is occupied with the notifications and undertakes actions when multiple indications are present. These indications vary from measured electricity drops, heat signals or simply the smell. Also, every RBT (see table 4) has one or more (community) officers that are (partly) engaged with weed related problems. When a plantation is found, the police will proceed with a criminal investigation and the plantation will be destroyed.

Furthermore, the municipalities are responsible in terms of administrative measures. An example of relevant administrative instruments is the withdrawal of housing permits. Administrative instruments can be enforced by the imposition of a penalty payment or the exercise of administrative coercion (Bieleman, Biesman, Snippe, & Beelen, 2009). Moreover, there are two recent developments in the field of legislation and regulations that may influence weed cultivation. In the first place, the duty of care of landlords has been tightened. The identity of the tenant must be determined. In addition, cash payments of the rent cannot be accepted anymore. Also, sufficient information from the tenant must be known, so that in case of a calamity contact can be made with the tenant. In some cases, a physical check of the property is required. This makes it more difficult for malicious tenants to obtain a property for conducting criminal activities (Boerman et al. 2017). A second development is entry of article 11a of the Opium Act on 1 March 2015. With the help of this act, action can be taken against

[7] An additional notification is defined as a remaining notification which is not an MMA or a police notification. This could mean that a citizen will use his or her personal name and data, which is a normal notification, but it can also be a notification by organizations like energy companies and social- healthcare organizations. Unfortunately, the police data does not give a lot of detail of these notifications. Moreover, every police officer defines and uses different codes and terms for reporting a notification. These two facts must be kept in mind when interpreting table 3.

illegal facilitators of cannabis cultivation, because preparatory acts are now punishable. This act mainly affects the grow shops. However, it is still too early to indicate if these relatively new rules are effective

Table 3. Notifications in Twente over 2015, 2016 and 2017

	Police notifications			MMA notifications			Other notifications		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
Almelo	5	0	12	24	61	47	43	71	59
Hengelo	4	1	2	23	20	35	23	32	37
Enschede	25	6	19	108	98	136	111	142	175
Twente	41	11	40	196	215	269	215	307	322

Source: Bluespot Report, 2018

Dark number

Being indicated by the multiple police officers[8] of the coordination team who are specialized in the cultivation of weed is the idea that the region of Twente is not dealing with such a big problem. The estimated number of weed plantations (2.300) is based on the average between 10 and 20%. However, reservations can be made about this statement in which the dark number (crime that is not being detected) is 80 to 90%. Due to the preventive and repressive effort that the police in Twente especially puts into this specific crime, more plantations could be found in theory. This means that the dark number may be in fact lower than the stated 80 a 90%, which currently, given the national average, gives a distorted picture of the size of the problem in Twente.

Size of the problem in Twente in comparison

In Twente, the police registered[9] a total of 676 plantations over the years 2015, 2016 and 2017. The police register these plantations based on their operational teams (see table 4). The RBT stands for 'Robust Basic (Basis) Team and' and it includes multiple municipalities in which specific police force (team) are responsible. Twente knows five of these teams, which are RBT Enschede, RBT Midden Twente, RBT Noord Oost Twente, RBT Noord Twente and RBT West Twente. The municipalities Almelo, Hengelo and Enschede are respectively part of RBT Noord Twente, RBT Midden Twente and RBT Enschede.

[8] See sub-question three for more information about the interviews.

[9] Reported plantations deviate from registered plantations. A report by a civilian becomes a registration when a plantation is found. However not every report leads to registration due to false or wrong reports and mistaken situations. Therefore, in practice the number of reports is higher than the actual registered plantations. Reports are also being used because of the absence of registered data.

Table 4. Registered illegal weed plantations per year and RBT over 2015-2017

RBT	Plantations 2015	Plantations 2016	Plantations 2017
RBT Enschede	117	111	106
RBT Midden Twente	47	44	30
RBT Noord Twente	33	48	48
RBT Noord Oost Twente	20	28	14
RBT West Twente	9	6	15
Total	**226**	**237**	**213**

Source: Bluespot Report, 2018

Table 5 displays the amount of illegal weed plantations in Twente. It is noticeable that RBT Enschede has most illegal weed plantations with at least half of the total amount. After RBT Enschede, RBT Midden Twente follows with about 20% and RBT Noord Twente with about 17% of all plantations in Twente. RBT Noord Oost Twente has an average of 10% and RBT West Twente, on average, holds about 5% of all plantations in Twente. Moreover, table 5 shows the 14 municipalities of Twente and the amount of registered weed plantations per municipality. Almelo, Hengelo and Enschede are marked. It is noticeable that illegal weed plantations are more common in these municipalities. The number of plantations in Almelo has risen since 2015 with 60% while the number of plantations has slightly dropped in Hengelo and Enschede. However, according to these numbers, the three marked municipalities together are still responsible for around 70% of all illegal weed plantations in Twente.

Table 5. Registered illegal weed plantations per year and municipality over 2015-2017

Municipality	Plantations 2015	Plantations 2016	Plantations 2017	Total
Enschede	**117**	**111**	**106**	**334**
Almelo	**25**	**43**	**40**	**108**
Hengelo	**31**	**29**	**25**	**85**
Oldenzaal	11	8	5	24
Twenterand	8	5	8	21
Haaksbergen	10	8	2	20
Hellendoorn	5	1	12	18
Hof van Twente	3	6	3	12
Losser	7	10	5	12
Dinkelland	1	6	3	10
Rijssen-Holten	3	2	1	6
Tubbergen	1	4	1	6
Wierden	1	3	2	6
Borne	3	1	0	4
Total	226	237	213	676

Source: Bluespot Report, 2018

Table 6 displays the number of reported (registered not available) illegal weed plantations per unit of the National Police in 2016 and 2017. In total, the police count 11 police units (including Landelijke Eenheid which will not be mentioned). Table 6 shows that police unit Oost-Nederland has by far the most reports of plantations of all units in the Netherlands. In 2016 and 2017 there were 1.833 reported plantations in the police unit Oost-Nederland. However, it should be noted that this unit is the largest unit within the National Police in terms of area and number of inhabitants. Therefore, an average of the number of plantations per inhabitant is given. Unfortunate, information about the amount of inhabitant of all police units (regions) is not available, but the amount of community officers per police unit is.

According to the norms, one community officer is signed to 5.000 inhabitants (Jaarverslag Politie, 2015). On December 31st, 2015, there are 3.194 community officers in the Netherlands, which covers 94% of the whole population. It should be noted that the units Oost-Nederland, Midden-Nederland and Noord-Holland deviate slightly of the norm because of understaffing (remaining 6%). This means that there are more inhabitants in these regions, which should lead to a lower number of plantations per 1.000 inhabitants.

Although table 6 shows that police unit Oost-Nederland must deal with around 18% of the total reported number of weed plantations, units as Zeeland-West Brabant, Limburg and Rotterdam are scoring worse in terms of reported plantations per inhabitant. Based on the current numbers, Oost-Nederland does not deviate a lot of the average of 0.33 (2016) and 0.28 (2017) plantations per 1.000 habitants (based on 94% community police coverage) while units as Zeeland- Brabant and Limburg score around 30% higher than average. Noticeable is the overall (positive) trend between 2016 and 2017 in which around 800 less plantations were reported in 2017.

Also important are the registered plantations within the districts of Police unit Oost Nederland. The police unit Oost-Nederland consists of five districts. Table 7 shows the number of reports of illegal weed plantations of unit Oost-Nederland per district in 2016 and 2017. According to the separate reports of all the Safety Regions in unit Oost-Nederland, the average plantations per 1.000 inhabitants is 0.27 in 2016 and 0.23 in 2017, based on 3.157.000 inhabitants**.** Based on these numbers of all districts, Twente is scoring around 40% higher than the average in 2016 and 2017. Gelderland-Midden also scores slightly higher while the remaining districts score below average. Also noticeable is the trend between 2016 and 2017 in which 102 less plantations were reported in 2017. A drop of plantation between 2016 and 2017 can be found in all districts except IJsselland.

Table 6. Reported illegal weed plantations per police unit, per 1000 habitants in 2016 and 2017

Police Unit	Plantations 2016	Plantations 2017	Community officers 31-12-2015[10]	Plantations per 1.000 inhabitants[11] 2016	Plantations per 1.000 inhabitants[11] 2017
Zeeland- West Brabant	645	594	276	0.47	0.43
Limburg	524	424	224	0.47	0.38
Rotterdam	743	802	382	0.39	0.42
Oost-Brabant	482	397	262	0.37	0.30
Oost-Nederland	***1.001***	***832***	***553***	***0.36***[12]	***0.3***
Noord-Nederland	600	242	332	0.36	0.15
Den Haag	521	455	344	0.30	0.26
Midden Nederland	*481*	*427*	*331*	*0.29*	*0.26*
Noord-Holland	*355*	*461*	*266*	*0.27*	*0.34*
Amsterdam	215	111	224	0.19	0.10
Total	5.567	4745	3.398[13]	0.33	0.28

Source: Bluespot Report, 2018 & Jaarverslag Politie, 2015

Table 7. Registered illegal weed plantations per district (Oost-Nederland) in 2016 and 2017

Police district	Plantations 2015	Plantations 2016	Plantations 2017	Inhabitants estimated in 2016[14]	Plantations per 1.000 inhabitants 2015	Plantations per 1.000 inhabitants 2016	Plantations per 1.000 inhabitants 2017
IJsselland	110	94	110	500.000	0.22	0.19	0.22
Twente	**226**	**237**	**213**	**627.000**	**0.36**	**0.38**	**0.34**
Noord- Oost Gelderland	185	165	144	812.000	0.23	0.20	0.18
Gelderland-Midden	215	221	157	675.000	0.31	0.33	0.23
Gelderland-Zuid	-	137	128	543.000	-	0.25	0.23
Total	-	854	752	3.157.000	-	0.27	0.23

Source: Bluespot Report, 2018

In addition to table 5, table 8 gives a clear oversight of the registered plantations per 1.000 inhabitants for the 14 municipalities in Twente over 2015-2017. The municipalities Enschede,

[10] No information available over 2016 or 2017.

[11] Rate of community officers - officers / number of inhabitants: 1: 5000.

[12] Marked cursively: slightly lower outcome in practice due to understaffing.

[13] Potential amount of community officers when there is 100% coverage.

[14] Sources of estimated inhabitants in 2016 from top to bottom (rounded on thousands):

Programmabegroting: Veiligheidsregio IJsselland, 2016

Programmabegroting: Veiligheidsregio Twente, 2016

Programmabegroting: Veiligheidsregio Noord- en Oost-Gelderland, 2016

Programmabegroting: Veiligheids- en Gezondheidsregio Gelderland Midden, 2017

Programmabegroting: Veiligheidsregio Gelderland Zuid, 2016

Almelo and Hengelo have the highest rate on the amount of plantation per 1.000 inhabitants, with Enschede scoring almost 100% higher than average. The municipalities Oldenzaal, Hellendoorn and Losser have scored high(er) averages as well.

According to the tables 4-8, there can be concluded that Police unit Oost-Nederland is scoring average on the amount of reported illegal weed plantation per 1.000 inhabitants in both 2016 and 2017. However, given the data from the districts within unit Oost-Nederland, there can be stated that Twente really stands out in a negative way with 0.38 and 0.34 reported plantations per 1.000 inhabitants in 2016 and 2017. Furthermore, looking at the different municipalities in Twente, it seems that Enschede, Almelo and Hengelo are together responsible for more than 70% of all registered illegal weed plantations every year -and thus for a high average number in Twente. Only Hengelo has scores slightly lower than average in 2017.

Table 8. Registered plantations per 1.000 inhabitants over 2015-2017

Municipality	Total plantations			Average inhabitants 2015 - 2017[15]	Plantations per 1.000 inhabitants		
	2015	2016	2017		2015	2016	2017
Enschede	**117**	**111**	**106**	**158.300**	**0.74**	**0.70**	**0.67**
Almelo	**25**	**43**	**40**	**72.500**	**0.35**	**0.59**	**0.55**
Hengelo	**31**	**29**	**25**	**80.800**	**0.38**	**0.35**	**0.31**
Oldenzaal	11	8	5	32.000	0.34	0.25	0.16
Twenterand	8	5	8	33.900	0.24	0.15	0.24
Haaksbergen	10	8	2	24.300	0.41	0.33	0.08
Hellendoorn	5	1	12	35.700	0.14	0.03	0.34
Hof van Twente	3	6	3	34.900	0.09	0.17	0.09
Losser	7	10	5	22.500	0.31	0.44	0.22
Dinkelland	1	6	3	26.200	0.04	0.23	0.11
Rijssen-Holten	3	2	1	38.000	0.05	0.05	0.03
Tubbergen	1	4	1	21.200	0.05	0.19	0.05
Wierden	1	3	2	24.100	0.04	0.12	0.08
Borne	3	1	0	22.800	0.13	0.04	0
Total	**226**	**237**	**213**	**627.200**	**0.36**	**0.38**	**0.34**

Source: Bluespot Report, 2018

Resume

The production, trade and smuggling of cannabis goes hand in hand with an extensive combination of negative consequences. These range from public health hazards and financial damage of several hundreds of millions of euros per year to the use of violence. Moreover, there are different forms of undermining like the interweaving of the upper- and underworld sometimes by threating and intimidation. There are also indications that, especially in the

[15] Source: CBS A, 2018 (rounded on hundreds).

southern provinces in the Netherlands, some cities have places where criminals have obtained an 'untouchable' and 'respectable' status. Given the size of the problem in Twente in comparison with the southern provinces, there can be concluded that the three major municipalities may also deal with these problems. According to the report ‘Nationaal dreigingsbeeld 2017’, there will be more future developments in the weed sector like professionalisation and automation, but there will be no major changes in the next four years. The effects of weed cultivation will therefore be approximately in the period 2017-2021 comparable to those in the period 2012-2017. Still, for the next four years, the weed cultivation is seen as a threat to the Dutch society and therefore also for Twente.

IV - Sub Question 2: Perspectives by relevant actors

To get a broader picture of the problem, its causes and its consequences in Twente, seven actors who deal with this problem on a daily scale have been interviewed. In total 4 police officers have been interviewed. These officers are part of the specific coordination team that is tasked with the illegal weed in Twente. Furthermore, two persons have been interviewed from the municipalities who are concerned with weed and its administrative approach. The last interview has been conducted with a staff member of an energy provider. He was concerned with the theft of energy. Various questions have been asked about the size of the problem, but also about the possible social factors and environmental factors, which might be the underlying cause. The interviews have been done anonymously. The explanations, contradiction and perspectives of the actors are mentioned in this chapter and are based on the experience and ideas of the actors.

Size and approach of the problem

The actors have indicated that illegal weed plantations are problematic. It is mentioned that around 120 plantations are found each year in Enschede alone and is therefore the municipality with the highest rates. Almelo and Hengelo score second and third. The police receive around 600 notifications of these plantations per year in Twente and it is also impossible for the police to pick up all the cases. The size of the problem is also indicated in terms of illegal sales volume. It is mentioned that Twente includes a turnover of at least half milliard euros due to the high number of illegal weed plantations, which can be compared to the turnover of a (big) company like Grolsch. The actors also indicated that the side-effects of weed plantations are most problematic. It is mentioned that other forms of crime, like violence and murder, have a correlation with these plantations. Moreover, the plantations can cause other with forms of other problems, like house fires, floods or electricity failures due to poor installation of these plantations.

In addition of the police and municipal approach that has been described in the previous sub-question, is explicit mentioned that civilians are of great importance for tackling this problem. Like stated before, most notifications of weed plantations come from citizens. Therefore, a low amount of registered weed plantation may occur due to low(er) awareness that weed can cause safety issues, like house fires, floods or electricity failures. To increase the awareness, the approach is now shifting to these safety issues. By giving preventative information in the neighborhoods the awareness and willingness to report will increase because people will also check each other more often. Moreover, if a notification is made, it is important that the result

of those notifications is fed back to the civilian; this way support will be kept in place for future notifications. Furthermore, strict collaboration between the different actors is important to show that weed plantations are not being tolerated. According to various actors indicate that it is important to show the media that a plantation is found or put a warning sign in front of the building and to make it accessible and possible for civilians to report to find more plantations.

Possible offenders

Various answers are given by asking questions about the possible offenders and why certain people choose to cultivate weed. However, all the actors give one common statement. People tend to start plantations because they just need a fast way to gain financial resources. The actors further explain this starting point in different ways. All actors indicate that people who are socially weaker have a high(er) chance to begin a plantation because it can quickly[16] provide the needs. Socially weak people are described by a combination of low income, using various social benefits, having a low education and ignorance of the rules and laws. Therefore, it is indicated that plantations are more common in depressed neighborhood where more people with lower social levels live. Moreover, people who have depts are more sensitive for this crime. According to the actors, these socially weak(er) people do not have much to lose, what could result in setting up a weed plantation more easily. Also, it is indicated that young(er) people tend to start a plantation or work at a plantation more often because this group has a high standard of living combined with little consciousness of what is legal and socially acceptable. However, no clear proof is given for this statement.

Another explanation that has been indicated for the socially weak(er) group is the low degree of punishment. When a plantation is being found it is hard to punish people in this specific group. Like stated before, people that are being caught have often no property -and thus fines may not be that successful and may even lead to earning money due to criminal activity again. Therefore, punishment is often community service, which does not scare off that much according to the actors. This may be the reason why socially weak(er) people choose to start a weed plantation again.

The actors also state that ethnicity has to do with the number of plantations in Twente. It is indicated that groups of people with another cultural background tend to cultivate weed more

[16] According to the Jansen, 2012 weed can be harvested in 4 weeks.

often[17]. Different reasons for this trend are given. For instance, it is stated that Syrian immigrants do not have enough knowledge of the laws here in the Netherlands, which result starting a weed plantation because of their prejudgment of the Netherlands and their drug policy. Another reason is the financial need of people with a migration background. These groups come to the Netherlands to make quick money. Also indicated is that the textile industry in Twente have recruited groups of uneducated Turkish and Moroccan people in the past for the textile industry. The actors indicated that after the problems in this sector, these groups were struggling with poverty and unemployment, especially in Enschede and Almelo, what could have resulted in finding illegal ways to earn money.

Another group of people that is being mentioned by the actors are the top criminals (also operates). This group is often formulated as underlying, untouchable and being the center of the network behind all smaller plantations. Individuals in these networks are often part of bigger criminal organizations. It is indicated that (often the socially weaker) people can loan equipment of these criminals to grow weed for them. This way, these criminals stay out of the picture, but in control. It is also mentioned that most of the times, a weed plantation is not owned by the individual who grows it on location (for himself), but by a top criminal who uses this person as staff for his own business.

Environmental factors

Questions regarding environment and geographical gave divers and contradictory answers. Various actors indicate (and agree) that depressed neighborhoods contain more plantations because of the type of inhabitants in these areas. However, there is no consensus on whether the border with Germany has influence. It is stated by multiple actors that the border is one of the main causes for a high(er) number of plantations. An underlying reason for this statement is the export of weed, which should be more efficient at the border and the amount of drug tourism from Germany that increases the demand of weed. But according other actors the border has nothing to do with it. An argument is that cities like Arnhem (170 plantations over 2016 - 2017) and Nijmegen (123 plantations over 2016 - 2017)[18], which can be compared to Enschede (217 plantations over 2016 - 2017), are also close to the border and deal with a lower number of plantations.

[17] Opposition: According to one actor, there is no indication that cultural background is a specific variable for starting a plantation.

Other interesting factors that have been mentioned is the amount of countryside in the municipalities in Twente. Support for making notifications is lower in the countryside. This might have to do that technical failures due to these plantations (electric failure, fire, etc.) are more likely to happen in populated areas. This explains that notifications by inhabitants are more common in populated areas (see table 2). Other factors that were mentioned are places with rental property and coffee shops.

Resume

Overall it can be stated that the actors are convinced that their municipalities are confronted with a large social problem. Various explanations for this social problem are given. Especially social factors are indicated multiple times. According to the respondents, the main reason for starting a plantation is the need for money. According to the actors, social factors like low income, using various social benefits, having a low education and ignorance of the rules and laws may be a cause. Also, it is indicated that plantations are more common in depressed neighborhood. The social characteristics are also seen within groups of ethnicities who came here to work, supplemented with the idea of unawareness and little knowledge of the law. Furthermore, the amount of countryside, rental property, coffee shops are mentioned. Last, the border is stated as an influencer, given the fact that most part of Twente adjacent to the border with Germany.

V - Sub question 3: Theories about the cultivation of weed

Theories may help to formulate plausible explanations for the prevalence of weed plantations in neighborhoods that can be tested with data from the police. Multiple theories that also match the perspective view of the actors will be explained in this chapter.

Theories

Growing weed in large quantities is punishable and therefore a crime. To understand why a person will commit a crime, multiple theories can be stated. Most criminological theories are focussing on why someone will become a criminal. Scholars have found causality between multiple factors such as genetic makeup, child-rearing practices, and social or psychological processes. However, not only are these theories difficult to test, they are also beyond the reach of a police officer. Therefore, theories and concepts of environmental criminology are much more useful for the police, because these theories deal with situational causes of crime. That is why the routine activity approach (Cohen & Felson, 1979), the rational choice perspective (Cornish & Clarke, 1986), the crime pattern theory (Brantingham & Brantingham, 1984) and the situational crime prevention theory (Clarke, 1980) will be explained. Research about the spatial effects of specific location interventions, for example by the police, is mainly from the practice of situational crime prevention and is therefore well compatible with the other theoretical perspectives in criminology named above (Clarke,1997). Another theory that will be explained briefly, is the broken window theory (Wilson & Kelling, 1982). This theory tries to understand why crime grows in certain places, given the state of the neighborhood. Next the concept of crime displacement (Bernasco, Elffers & Bruinsma, 2006) will be given, a phenomenon that is often linked to the problem of illegal weed plantations in the Netherlands.

A - The routine activity approach

The routine activity approach of Cohen and Felson underlined the idea that crime emerges when a likely offender converges with a suitable crime target in *time* and *place, with* the absence of a capable guardian against crime. On a macro level, the theory stated that certain features of larger societies, like cities or communities, can make these convergences much more likely. The presence of these factors is also known as the crime triangle (see figure 1). The existence of a likely criminal is taken for granted since greed and selfishness (see rational choice perspective: desires or needs) are ordinary explanations of most criminal motivation. Also, it makes no distinction between an inanimate or human target since both can meet the

purpose of the offender. Last, it defines a *capable guardian* as a human actor or as a security device, like a security camera. According to this approach, a worst-case scenario underlines that there is no capable guardian, a perfect time and place, a likely and motivated offender and an attractive victim. In case of a high percentage of weed plantations, this means that there are a lot of likely offenders who have the ideal circumstances, without that much guardianship to grow weed (target).

Figure 1, Crime Triangle

Therefore, this theory presumes that specific locations in Twente have 'ideal circumstances' to grow weed or that the police is less preventive on tackling these plantations. Another reason is that the more 'serious criminal' is less likely to be caught in the progress. According to the police, these criminals have multiple plantations in spaces of others. They are part of criminal organizations and use landlords or managers to run the plantations. That way they remain out of the sight of any possible guardian like the police (Politie C, 2017).

The routine activity approach is used as a theoretical foundation for this research. The different sub-questions derived from this theory. The presence of a guardian (police approach), ideal circumstances in time and place (environmental characteristics) and a likely offender (social-economic factors) are set as factors that could have an influence on the high amount of weed plantations. The following theories will further discuss these factors.

B - Rational choice perspective

The purpose of the rational choice perspective of Cornish & Clarke (1975) has always been to offer a way of looking at offending (crime) that is both present-centered and recognizes the influence of the environment on behavior (Wortley & Mazerolle, 2008). This environment can be both the environment of everyday life like lifestyle, motives, needs and inducements, and the environment to achieve goals. The concept of this perspective consists of five core concepts and four decision making models. These five concepts and three of the four decision-models will be described, also regarding their connection with weed plantations.

Criminal behavior is purposive; the view that crimes are purposive and deliberate acts. Criminals commit these crimes with the intentions of benefitting themselves. This includes satisfying their desires, which can be sexual, excitement, autonomy, revenge but also material

like earning money. According to this concept, the decision to begin a weed plantation is fully purposive because offenders want to earn money (fast) to satisfy their desire.

Criminal behavior is rational; the perspective of rational choice underlines that perfect rationality is not the same as presuming rationality. According to this theory, people are subjected to bounded rationality (Simon, 1990). This means that choices are not based on perfect rationality but are influenced by less perfect circumstances. Choosing to offend is a risky business because the possible costs and benefits are hard to estimate in advance. Circumstances like limited time, pressure, skill and experience influence the choice of the offender. However, that is why most decisions are likely to produce a satisfying feeling than an optimal outcome. In case of weed, people are choosing to begin a weed plantation because its circumstances are not that risky, and it produces a lot of satisfying. The punishments when caught are not that extreme. It is often a fine or a few hours community service (Hennepadvocaat B, 2017). Furthermore, the chance to get caught are very low, according to the police, only 1 in 10 get caught.

Criminal decision-making is crime specific; According to this concept, specific offences bring benefits to offenders with specific needs and motives in mind. This means that offenders are choosing for a specific type of crime because only those crime satisfy their needs. For instance, burglary satisfies the need for cash but also the need for a stealthy thrill. In case of weed plantations, people want cash, very fast. Their motive is focused on making a lot of money. However, there can be underlying 'positive' motives as well. Cash can be used for various needs, like paying a dept or taking care of a family.

Criminal choices fall into two broad group; the theory describes 'involvement' and 'event' decisions. Event decisions are crime centered and focus on the crime 'at hand' like preparing and carrying out the specific action or crime. Involvement decisions are all about the career of the offender its initial involvement, continued involvement, and distance. This also applies for weed plantations. Some offenders keep starting new plantations (continued involvement) while some of them also just stop after being caught of stop because their need is satisfied. *There are separate stages of involvement;* Like said before, there are three stages of involvement. These are initial involvement (initiation), continued involvement (habituation), and distance. Each stage has a set of variables that can influence the choice of an offender. The initiation stage is being influenced by an offender's experience of other crime, background factors like personality and education or need and desires like described before. The habitation stage is about continuation and depend on failure or success of the criminal

act. The distance stage is, according to the theory, inevitable since offending also influences other extraneous factors like marriage, divorce, health or death. These stages can also be with weed plantations. It starts with making quick cash to fulfill needs with low risks. Therefore, successful offenders keep on going until they are being caught by the police or being caught in a 'criminal network' full of dangers. In the end, both ways stimulate to distance from criminal acts.

Criminal events unfold in a sequence of stages and decisions; like stated before, initiation, habituation, and distance are part of a sequence of a career of crime. However, each stage has different variables. For the initiation stage, 8 different sets of variables (Clark & Cornish called them Boxes) are stated (see figure 2).

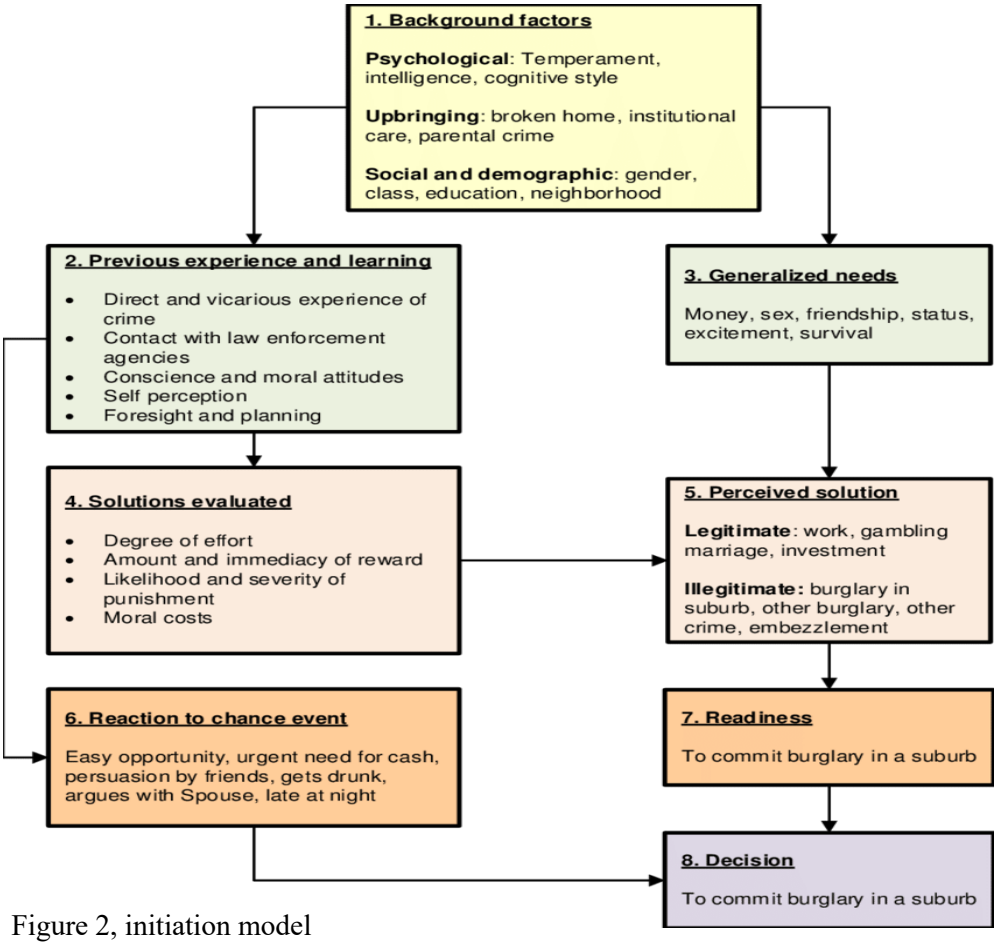

Figure 2, initiation model

Box 1 holds various psychological and sociological background factors. Traditionally, these variables were the main cause for criminal behavior. This theory treats these variables only as orienting factor. The orienting factors contribute to box 2, which stands for experience and learning factors, and box 3, the current life needs. These three boxes together help shape the solutions, which is box 4. Box 5 are the inducements (perceived solutions) that trigger or

increase these needs even further. This will result in box 6 and 7, reaction to opportunities and evaluating them in terms of risk, effort and costs. Finally, this result in a decision to do the actual crime (box 8). Important for this research is the fact that box 1 consist of three factors that, in the end, can cause criminal behavior. These factors are biopsychological (temperament, gender and intelligence), overall education (broken home, institutional care, parental crime and poor education), and social (class, ethnicity, social exclusion). Furthermore, habituation depends less on background factors but more on succeeding or failing of the actual crime. In this stage, multiple changes occur in the lifestyle of the offender. The offender becomes friendly with other criminals, and he or she will be labeled as a criminal as well. The offender will attain more experience and therefore more skill in committing crimes. Lastly, the offender will become dependent on crime. He or she devalues legitimate work and justifies crime. However, this eventually will lead to desistance because the offender is starting to fail. It is the lack of success, and life circumstances that play a role in decision making.

The rational choice perspective aims to answer why people become an offender by explaining the choice of an offender. This perspective assumes that the background of an individual can be the cause for future crime. Also, the situational opportunity that triggers inducements like types of housing or living in a depressed neighborhood can be the cause for crime (Tops & Van der Torre, 2014).

C - The crime pattern theory

According to the crime pattern theory, crime does not occur randomly or uniformly in time, space or society. In fact, there are hotspots and coldspots with high repeat offenders and high repeat victims (Wortley & Mazerolle, 2008). Paul Brantingham and Patricia Brantingham (1984) stated that a strong geographic resonation lies in the thought progress of committing a crime. According to the theory, crime happens when the activity space of an offender interacts with the activity space of a target or victim. The definition of ‘a person’s activity space’ consists of all the locations a person is traveling to, in everyday life. For example, work, school or home, but also shopping malls. These areas are called nodes. Movement from one node to another creates an awareness space. Due to the frequency of traveling in this awareness space, these paths will become familiar to offender. Suitable targets within the awareness space of an offender are more likely to be victimized. This area, a common area for both offenders and victims is labeled as the action space.

Even though there is no direct 'victim' in case of weed plantations, the crime pattern theory can be applied for the cultivation of weed in another way. The theory claims that crime occurs when the offender and victim (target) meet each other in a specific geographical area. However, this can also be a seller (offender) that crosses a buyer (target). According to the police registrations, 80 percent of all Dutch cultivated weed is sold abroad (Politie C, 2017). This presumes that the municipality of Enschede, an area close to the border with Germany, can be attractive for growers (sellers) and for potential foreign buyers who can travel (short) without much risk. In this case, Enschede is an excellent awareness space for both parties to trade weed. Due to this interpretation of the crime pattern theory, the geographical location can also be an influencer for weed plantations.

D - Situational crime prevention

The situational crime prevention is a criminological perspective that aims at the expanding of crime-reduction measures (Clarke, 1980). This perspective calls for analysing a specific crime type to uncover the situational factors. Multiple intervention techniques can be submitted to manipulate the related situational factors to reduce the specific crime. In theory, reducing crime can be achieved by reducing factors that increase a person's motivation to commit a crime or by making it impossible for it to be committed no matter what the motivation or intent is. The situational crime prevention includes five general strategies with 25 techniques (see table A) to reduce crime (Cornish & Clarke, 2003). These include both hard and soft interventions. Hard interventions contain measures to deter offenders from committing crimes or making it near impossible to commit the crime. Soft interventions are about reducing the situational factors that increase the motivation of a person to commit a crime. The techniques are stated in the table A. This perspective is associated with problem-oriented policing, currently one of the leading policing strategies in the field (Eck & Madensen, 2012). Problem oriented policing aims at specific problems or crime to create a proactive and preventive strategy to eliminate the problem. Therefore, this perspective can be used to analyze to what extent the police (guardian) is tackling the problem of illegal weed plantations.

Table A. Five general strategies with 25 techniques

Increase the Effort	Increase the Risks	Reduce the Rewards	Reduce Provocations	Remove Excuses
1. *Target harden*	6. *Extend guardianship*	11. *Conceal targets*	16. *Reduce frustrations and stress*	21. *Set rules*
2. *Control access*	7. *Assist natural surveillance*	12. *Remove targets*	17. *Avoid disputes*	22. *Post instructions*
3. *Screen exits*	8. *Reduce anonymity*	13. *Identify property*	18. *Reduce emotional arousal*	23. *Alert conscience*
4. *Deflect offenders*	9. *Utilize place managers*	14. *Disrupt markets*	19. *Neutralize peer pressure*	24. *Assist compliance*
5. *Control tools/weapons*	10. *Strengthen formal surveillance*	15. *Deny benefits*	20. *Discourage imitation*	25. *Control drugs and alcohol*

E - Broken window theory

The broken window theory of Wilson & Kelling (1982) states that signs of rubbish causes people to do (other) small criminal acts. People are social animals and to find out what desirable behavior is in a certain environment, we look at the behavior of others. When others are absent, we look at factors in the environment that give us an impression of what kind of behavior is tolerated (to find out what the social norm is). So, if there is a broken window and nobody does anything about it, then that is tolerated in that context (Kelling & Wilson, 1982). Therefore, 'you may' throw in another window. According to Tops & Van der Torre (2014), this is also why weed plantation are more common in depressed districts with certain type of houses. Parts of the broken window theory are also shared by the social control theory of Hirschi. This theory does not try to explain why some people commit offenses, but why people do not. A key element of the social control theory is that the environment of the individual also implies what values and norms must be adopted. That is why the bond between the individual and the environment is decisive for his or her behavior. When this bond is strong, the individual will behave more social. If the bond is weak or not present at all, criminal behavior will become a matter of time (Jan van Dijk, 2011).

F - Crime displacement

The objection to situational-restrictive measures, that combat crime, is that these measures do not offer a solution to completely reduce crime. According to the crime displacement perspective, these measures can lead to a displacement of the problem (Bruinsma, Bernasco, & Elffers, 2006). Perpetrators simply deviate from areas where fewer of these measures are applied. This phenomenon is called the 'waterbed' effect. According to Bruinsma, Bernasco and Elffers (2006), exercising pressure (e.g. crime reducing measures) in one place leads to a reduction of crime in that location, but to an increase elsewhere, with the total volume (amount of crime) remaining the same. In case of illegal weed plantations, it is interesting to

take this effect into account. This perspective also assumes that crime occurs less in places where a guardianship is in place (however this should result in displacement of crime).

Resume: explanatory variables

Given the answers of the actors, an explanatory model can be made based on variables from the theories. The routine activity approach is primarily used as basis for the factors of sub-question four because it closely matches the current facts and opinions by the actors. This theory underlines the importance of a 'likely' offender in a crime. This likely offender is typified by his or her social origin. Variables like ethnicity, employment and social assistance are therefore interesting because they may influence the decision to commit a crime. These variables also match the rational choice theory and are therefore used as factors in sub-question four.

Moreover, the routine activity also underlines a suitable place and/or target. In this case, depressed areas, that are often impoverished (broken window theory), can be displayed as these places due to a high percentage of socially weak(er) inhabitants and places. However, the border may also be a potential suitable place due to the idea that more plantations are found closer at the border. The hypothesis is that more plantations are found when the distance to the border becomes smaller. Therefore, the distance to the border is also chosen as a factor.

The last factor that originates from the of the routine activity approach is guardianship. The routine activity approach indicates that absence of guardianship, like more formal (police) or informal (social control) guardianship may result in more plantations. Furthermore, the police can also have a repressive function instead of a preventive one. Therefore, the variable in this case is the community officer.

VI - Sub Question 4: Analysis of the explanatory factors

This chapter displays the analysis results of the factors. First the social benefits and unemployment will be explained, next the non-western ethnicities, third the border with Germany and last the guardianship in the districts. Multiple tables will be discussed, and short interim conclusions are given based on the results.

SPSS is used to understand how the variables correlate with each other. Based on the values, multiple correlations can be made. The Spearman's rho is used in this research and is chosen based on an $n < 20$ which is the case in this research. The Spearman's rho is a measurement where the difference between two values is meaningful and it can be checked how strong the correlation is. The Spearman's rho (rho) returns a value of between -1 and +1. A -1 means there is a strong negative correlation and +1 means that there is a strong positive correlation. A 0 means that there is no correlation. Furthermore, it can be concluded that there is no statistically significant correlation between the two variables when 'sig' is higher than 0,05. Note, there cannot be checked whether there is a causal relationship. SPSS output can be found in the appendix.

Factor 1: Social & unemployment benefits

A potential factor that has been stated is the simple need for money. Multiple reasons can be described why an individual need more financial recourse. Hypothetically, having a low income, due to a social benefit or no work at all may result into starting a criminal activity. Therefore, this research analyzed the number of social assistance benefits (WWB)[19] and the number of unemployment assistance benefit (WW)[20] per district (and municipality). The reason for these specific social-economic factors is that the WWB offers a subsistence minimum income to individuals and the WW offers a 30% lower income than usual. Data of 2012 has been analyzed due the fact that more recent information was not available about the WWB and WW. The WWB and WW are displayed in a number per 1.000 inhabitants in order make it analyzable. The total number of plantations is based on the years 2015, 2016 and 2017 and is shown in total numbers and in a number per 1.000 habitants.

[19] WWB stands for 'Wet Werk en Bijstand'. The WWB offers a guarantee for the subsistence minimum in the form of a social assistance benefit.

[20] WW stands for 'Werkloosheidswet'. A WW benefit is a temporary income. You will receive WW during the period that you are looking for a new job.

Table 9. Number of WWB and WW (2012) versus plantations in Enschede over 2015 - 2017

Enschede	Population	Plantations	WWB/1.000	WW/1.000	P/1.000
Wijk 00 Binnensingelgebied	23.930	55	40	23	2.3
Wijk 01 Hogeland – Velve	11.885	21	31	22	1.8
Wijk 02 Boswinkel – Stadsveld	23.445	66	39	26	2.8
Wijk 03 Twekkelerveld - T.H.T.	9.525	25	41	23	2.6
Wijk 04 Enschede-Noord	19.400	38	28	18	2.0
Wijk 05 Ribbelt - Stokhorst	8.580	12	26	17	1.4
Wijk 06 Enschede-Zuid	34.890	59	37	22	1.7
Wijk 07 Bedrijfsterreinen/west	300	7	33	0	23
Wijk 08 Glanerbrug/omgeving	17.255	32	23	20	1.9
Wijk 09 Landelijk gebied en kernen	8.840	3	7	19	0.3

Source: CBS B, 2012 & CBS C, 2012

A correlation analysis between the WWB/1000 and P/1000 in Enschede gives in a rho = 0,661 that suggests a strong positive correlation between these two variables. Analysis between the WW/1000 and P/1000 results in a rho = 0,262 which is a weak positive correlation and not significant. Therefore, it can be stated that the WWB has a strong relationship with the number of plantations in the municipality Enschede.

Table 10. Number of WWB and WW (2012) versus plantations in Almelo over 2015 - 2017

Almelo	Population	Plantations	WWB/1.000	WW/1.000	P/1.000
Wijk 10 Binnenstad	5.175	9	41	21	1.7
Wijk 11 De Riet	6.940	18	40	27	2.6
Wijk 12 Noorderkwartier	5.200	2	8	17	0.4
Wijk 13 Sluitersveld	5.725	12	40	28	2.1
Wijk 14 Wierdense Hoek	6.760	13	47	21	1.9
Wijk 15 Nieuwstraat-Kwartier	3.280	13	76	24	3.9
Wijk 16 Ossenkoppelerhoek	7.040	22	27	28	3.1
Wijk 17 Hofkamp	3.570	0	3	17	0
Wijk 18 Schelfhorst	11.460	7	13	19	0.6
Wijk 19 Windmolenbroek	14.295	11	11	19	0.8
Wijk 20 Aadorp	1.515	0	13	13	0
Wijk 21 Bornerbroek	1.795	0	0	11	0

Source: CBS B, 2012 & CBS C, 2012

A correlation analysis between the WWB/1000 and P/1000 in Almelo gives a significant rho = 0,806 which also suggests a strong positive correlation between these two variables. A strong positive correlation can also be found when analysing the WW/1000 and P/1000 which results in a rho = 0,929. Therefore, it can be stated that both the WWB as the WW influence the number of plantations in the municipality in Almelo.

Table 11. Number of WWB and WW (2012) versus plantations in Hengelo over 2015 - 2017

Hengelo	Population	Plantations	WWB/1.000	WW/1.000	P/1.000
Wijk 00 Binnenstad	2.530	4	28	32	1.6
Wijk 01 Hengelose Es	10.470	8	51	22	0.8
Wijk 02 Noord	9.575	18	40	24	1.9
Wijk 03 Hasseler Es	12.885	6	12	19	0.5
Wijk 04 Groot Driene	9.005	0	19	14	0
Wijk 05 Berflo Es	6.535	24	41	31	3.7
Wijk 06 Wilderinkshoek	10.325	6	23	23	0.6
Wijk 07 Woolde	7.235	9	15	19	1.2
Wijk 08 Slangenbeek	10.415	6	5	15	0.6
Wijk 09 Buitengebied	1,.955	1	5	10	0.5

Source: CBS B, 2012 & CBS C, 2012

In Hengelo, a correlation analysis between the WWB/1000 and P/1000 results in a positive correlation of rho = 0,654 between these two variables, which is also significant. A strong (and significant) positive correlation can also be found when analysing the WW/1000 and P/1000 which results in a rho = 0,829. Therefore, it can be stated that the WW has a larger influence on the number of plantations in the municipality Hengelo than the WWB.

Furthermore, a correlation analysis of all districts together has been made. An analysis between the WWB/1000 and P/1000 results of all districts gives a strong positive correlation of rho = 0,768. Analysis between the total WW/1000 and P/1000 results in a relative strong correlation of rho = 0,632 which is also a positive correlation. In total there can be stated that both the WWB as the WW have a large influence in the three municipalities.

Factor 2: Western & non-western ethnicities

According to various actors, people with an immigration background have little knowledge and awareness of the Dutch laws and its drugs policy. This could mean that foreign people that live here have a high(er) chance to set up a weed plantation. The crime theories also discuss the possible correlation between ethnicities and the number of crimes in a region or district. Therefore, it was chosen to look at the percentage of western and non-western ethnicities in the different districts of the municipalities. The percentage is based on the situation in 2017. The total number of plantations is based on the years 2015, 2016 and 2017 and is shown in total numbers.

Table 12. Number of ethnicities (2017) versus plantations in Enschede over 2015 - 2017

Enschede	% Western	% Non-Western	Plantations
Wijk 00 Binnensingelgebied	15	18	55
Wijk 01 Hogeland – Velve	12	12	21
Wijk 02 Boswinkel – Stadsveld	13	17	66
Wijk 03 Twekkelerveld - T.H.T.	14	15	25
Wijk 04 Enschede-Noord	14	18	38
Wijk 05 Ribbelt - Stokhorst	12	8	12
Wijk 06 Enschede-Zuid	11	26	59
Wijk 07 Bedrijfsterreinen en west	11	5	7
Wijk 08 Glanerbrug en omgeving	12	9	32
Wijk 09 Landelijk gebied en kernen	8	2	3

Source: CBS D, 2017

A correlation analysis of the western ethnicities and the number of plantations in Enschede results in a positive correlation of rho = 0,531 however this correlation is not significant. Furthermore, a strong correlation is found between the non-western ethnicities and the number of plantations. An analysis between these two variables gives an rho = 0,888 which is a positive correlation. Therefore, it can be stated that there is a strong relationship between the non-western ethnicities and the number of weed plantations in Enschede.

Table 13. Number of ethnicities (2017) versus plantations in Almelo over 2015 - 2017

Almelo	% Western	% Non-Western	Plantations
Wijk 10 Binnenstad	13	9	9
Wijk 11 De Riet	10	15	18
Wijk 12 Noorderkwartier	8	7	2
Wijk 13 Sluitersveld	10	9	12
Wijk 14 Wierdense Hoek	11	34	13
Wijk 15 Nieuwstraat-Kwartier	11	31	13
Wijk 16 Ossenkoppelerhoek	12	27	22
Wijk 17 Hofkamp	8	6	0
Wijk 18 Schelfhorst	11	13	7
Wijk 19 Windmolenbroek	9	11	11
Wijk 20 Aadorp	6	1	0
Wijk 21 Bornerbroek	3	0	0

Source: CBS D, 2017

In contrary with Enschede, a correlation analysis of the western ethnicities and the number of plantations in the municipality of Almelo results in a stronger correlation of rho = 0,702. However, a strong correlation has also been found between the non-western ethnicities and the number of plantations in Almelo. An analysis between the two variables gives an rho = 0,880. Therefore, it can be stated that there is a relative strong relationship between both types of ethnicities and the number of weed plantations in Almelo.

Table 14. Number of ethnicities (2017) versus plantations in Hengelo over 2015 - 2017

Hengelo	% Western	% Non-Western	Plantations
Wijk 00 Binnenstad	11	12	4
Wijk 01 Hengelose Es	10	14	8
Wijk 02 Noord	10	20	18
Wijk 03 Hasseler Es	10	10	6
Wijk 04 Groot Driene	10	19	0
Wijk 05 Berflo Es	12	17	24
Wijk 06 Wilderinkshoek	9	9	6
Wijk 07 Woolde	9	9	9
Wijk 08 Slangenbeek	8	8	6
Wijk 09 Buitengebied	5	2	1

Source: CBS D, 2017

Both correlation analyses of the two different ethnicities in the municipality of Hengelo have resulted in correlations that have no significant relationships. Analysis between western ethnicities and the number of plantations gives a rho = 0,318 and an analysis between the non-western ethnicities and plantation resulted in rho = 0,320. Both results indicated no significant relationship. Therefore, it can be concluded that ethnicities have no relationship with the number of plantations in Hengelo.

A correlation analysis of all data together resulted in two positive relationships. An analysis of the western ethnicities and the number of plantations gives a rho= 0,798 which is a relative strong positive relation. The result of the analysis between the non-western ethnicities and the number of weed plantations is rho = 0,669, which is weaker, however still significant. Overall. Therefore, it can be concluded that there is a relationship between the two ethnicities and the number of found illegal weed plantations in the three municipalities together.

Factor 3: The border with Germany

The opinions of the actors about whether the border is a factor for the number of plantations are divided. Various experts have stated that the border is crucial and high numbers of plantations are more common in border areas. Other experts say that there is no proof for this statement and that high numbers of plantations are found anywhere in the country. However, numerical information did indeed show that plantations are found more frequently in the border regions like Zeeland, Noord-Brabant and Limburg. To find a correlation and to test this statement for the municipalities in Twente (and the three municipalities Almelo, Hengelo and Enschede), it was decided to examine the distance between the centrum of the fourteen municipalities (estimated and rounded on km2) and the nearest border (road) with Germany with the number of registered weed plantations over the years 2015 - 2017. Data about the distance is being displayed in terms of kilometres, and the plantations per 1.000 inhabitants.

A correlation analysis between the distance to the border with Germany and the amount of registered plantation per 1.000 inhabitants & number of results in a rho = -0,543 which is a negative correlation. Moreover, it is indicated that this correlation is significant which means that there is a relationship between these two variables.

Table 15. Distance between the fourteen municipalities and border versus plantations over 2015 - 2017

Municipality	Total plantations	Inhabitants	Plantations / 1.000 inhabitants	Distance in km2
Enschede	334	158.300	2.1	5
Almelo	108	72.500	1.5	13
Hengelo	85	80.800	1.1	13
Oldenzaal	24	32.000	0.8	7
Twenterand	21	33.900	0.6	10
Haaksbergen	20	24.300	0.8	5
Hellendoorn	18	35.700	0.5	20
Hof van Twente	12	34.900	0.3	18
Losser	22	22.500	1.0	2
Dinkelland	10	26.200	0.4	4
Rijssen-Holten	5	38.000	0.1	23
Tubbergen	6	21.200	0.3	6
Wierden	6	24.100	0.2	16
Borne	4	22.800	0.2	17

Source: Google Maps, 2018

Notably, when the three municipalities are left out of the analysis, the influence becomes stronger with a negative correlation of rho = -0,659. This may indicate that the municipalities Enschede, Almelo and Hengelo are outliers in this analysis, probably due to other (unknown) factors.

Factor 4: Guardianship

According to the theory, absence of guardianship can lead to more criminal activities. Therefore, it is interesting to analyse whether the current presence of guardianship has a correlation with the number of illegal weed plantations in the districts. To test this relationship, an analysis between the number of community officers and the total number of registered plantations in the district has been carried out. The theoretical idea is that the presence of these police officers leads to an absence of plantations due to the preventive presence of the police. However, the opposite idea might also be true. Hypotactically, a high number of officers can also lead to more registered plantations, which suggest that the officers work more repressive, and therefore find more.

In order to test this repressive work even further, another test has been carried out. For the police to tackle a weed plantation, a plantation must be discovered first. Like stated before, this can be done by police surveillance, but also by MMA or additional notifications. MMA stands for 'Meld Misdaad Anoniem', which means anonymously reported crime. In most cases, citizens, that may have suspicion, report to the police anonymously. Notifications are categorized into police notifications (from police intelligence or patrol), MMA notifications (written letters or anonymously calls) and additional notifications. The notifications are analysed to test whether the police are finding plantations based on these notifications. Hypotactically, the more notifications, the more plantations are being found by the police. This could mean that the police officers work repressive against these plantations. In order to test this, a correlation analysis is made between the total registered plantations per district and the number of notifications in that district.

Table 16. Number of plantations versus notifications and community officers.

Enschede	Plantations	Notifications	Community police officers
Wijk 00 Binnensingelgebied	55	130	5
Wijk 01 Hogeland – Velve	21	56	2
Wijk 02 Boswinkel – Stadsveld	66	132	7
Wijk 03 Twekkelerveld - T.H.T.	25	76	0.5
Wijk 04 Enschede-Noord	38	74	4
Wijk 05 Ribbelt - Stokhorst	12	33	1
Wijk 06 Enschede-Zuid	59	160	7
Wijk 07 Bedrijfsterreinen en west	7	23	0.5
Wijk 08 Glanerbrug en omgeving	32	80	1.5
Wijk 09 Landelijk gebied en kernen	3	11	3.5

Source: Bluespot report, 2018

A correlation analysis between the number of plantations and the community officers results in a positive significant correlation of rho = 0,738. This means that there is a strong relationship. More community officers correlate with finding more plantations. The other analysis is between the notifications and the number of plantations and this analysis show also a positive correlation of rho = 0,952. Both analysis could indicate the idea that the community officers in Enschede work repressively, finding plantations when notification are receive.

Table 17. Number of plantations versus notifications and community officers.

Almelo	Plantations	Notifications	Community police officers
Wijk 10 Binnenstad	9	30	1
Wijk 11 De Riet	18	60	0.5
Wijk 12 Noorderkwartier	2	8	1
Wijk 13 Sluitersveld	12	29	1
Wijk 14 Wierdense Hoek	13	30	2
Wijk 15 Nieuwstraat-Kwartier	13	29	1
Wijk 16 Ossenkoppelerhoek	22	57	1
Wijk 17 Hofkamp	0	0	0.5
Wijk 18 Schelfhorst	7	18	1
Wijk 19 Windmolenbroek	11	39	2
Wijk 20 Aadorp	0	10	1
Wijk 21 Bornerbroek	0	11	2

Source: Bluespot report, 2018

An analysis in Almelo gives an opposite image. A correlation analysis between number of plantations and the community officers results in a negative insignificant correlation of rho = -0,040 which indicate that there is no relationship between the two variables. However, a positive correlation is found between the notifications and the number of plantations. This test show a significant positive relationship of rho = 0,860. This means for the municipality of Almelo that the number of notifications have a strong relation with the number of found plantations.

Table 18. Number of plantations versus notifications and community officers.

Hengelo	Plantations[21]	Notifications	Community police officers
Wijk 00 Binnenstad	4	12	1
Wijk 01 Hengelose Es	8	25	1
Wijk 02 Noord	18	33	0.5
Wijk 03 Hasseler Es	6	17	0.5
Wijk 04 Groot Driene	0	6	2
Wijk 05 Berflo Es	24	25	1
Wijk 06 Wilderinkshoek	6	28	1
Wijk 07 Woolde	9	7	1
Wijk 08 Slangenbeek	6	10	1
Wijk 09 Buitengebied	1	3	0

Source: Bluespot report, 2018,

A correlation analysis in the municipality of Hengelo between number of plantations and the community officers also results in a insignificant correlation of rho = -0,118. Like in the municipality Almelo, it indicates that there is no relationship between the the number of

[21] Due to the absence of certain postcodes, it might be the case that the number of plantations is higher than the number of notifications in a district.

officers and the found plantations. an analysis of the the notifications and the number of plantations does show a positive correaltion of rho = 0,652 which is also significant.

VII - Conclusion

The production, trade and smuggling of cannabis goes hand in hand with an extensive combination of negative consequences. Given the size of the problem in Twente in comparison with the southern provinces, there can be concluded that the three major municipalities Almelo, Hengelo and Enschede also deal with various problems. Relevant actors showed multiple and various factors could explain the cultivation of weed in these municipalities. The factors that have been analysed are based on the perspective of these actors and the various theories. Therefore, four social characteristics (social -and unemployment benefits and western -and non-western ethnicities) an environment variable (distance to the border) and the presence of guardianship (community officers) were chosen as main factors to answer the following research question:

'What explains the amount of weed plantations in the municipalities Enschede, Almelo and Hengelo based on the view of relevant experts, theories and quantitative data?'.

To give an answer on this research question, the factors must be explained separately. The first factor was: *'The number of inhabitants that receive social or unemployment benefits in the municipalities Almelo, Enschede and Hengelo'.* Correlation analysis between the social benefit (WWB) and the number of plantations in municipalities Enschede, Almelo and Hengelo have shown a positive (strong) relationship. An analysis between the unemployment benefit (WW) and the number of plantations displayed a divided answer. In Enschede there is no relationship (not significant), but in Almelo and Hengelo there is a strong positive correlation. This means that there is a relationship between the two variables in these two municipalities. By analyzing all variables together, there can be concluded that there is a correlation between both WWB (rho = 0,768) as WW (rho = 0,632) and the number of illegal weed plantations.

Based on theory, this outcome possibly confirms the idea that social characteristics (like financial needs) influences the number of weed plantations that are being found in the three municipalities. This view is also confirmed by the actors, explaining that Enschede and Almelo have more inhabitants with a lower social and financial background than Hengelo due to the fallen industries in these municipalities. Therefore, this significant positive correlations between social and unemployment benefits and the number of found weed plantations are quite plausible in terms of a causal relation.

The second factor was: '*People with a non-western & western migration background in the municipalities Almelo, Enschede and Hengelo'.* The outcome of a correlation analysis between the western ethnicities and the number of plantations showed also different results in the municipalities. In Enschede and Hengelo there is no relationship, (not significant) but in Almelo there is a positive significant relationship. A correlation analysis between the non-western ethnicities and the number of weed plantations displayed more significant outcomes. In Enschede and Almelo there is a positive relation but once again Hengelo shows no significant relationship. By analyzing all variables together, there can be concluded that there is a positive correlation between the western (rho = 0,798) as non-western (rho = 0,669) and the number of plantations.

Just like the previous social characteristics, this correlation also shows also a possible confirmed link between the social characteristic 'origin' and the number of weed plantations in the three municipalities. This view is also confirmed by multiple actors, stating that especially non-western ethnicities have a higher chance to begin a plantation. This may have to do that these people are unemployed (especially in the municipalities Almelo and Enschede due to the fallen textile industries), do not speak the Dutch language and do not have knowledge of the Dutch law. Although western ethnicities also show a positive relationship with the number of plantations, it is, according to the correlation analysis, more plausible that non-western ethnicities have a causal relationship with the number of found plantations.

The third factor was: *'The distance to the border for the 14 municipalities in Twente'.* Analyzing the distance between the municipalities in Twente (including the three specific municipalities), and the nearest border with Germany with the number of plantations in the municipalities results in a negative significant correlation (rho = -0,543) which means that there is a relationship between these two variables. However, when the three major municipalities are left out of the correlation analysis, the negative significant relationship becomes even stronger (rho = -0,659) which could indicate that there are other factors present in the three municipalities.

A high degree of plausibility in terms of causality between the distance to a border and the number of found plantations is hard to conclude. Although correlation analysis shows a negative significant outcome in Twente, it becomes stronger by leaving out the three major municipalities. This could indicate that other variables, like the social characters have more influence in these major municipalities. Like stated by the theory and the actors, a city like area (like Enschede) has just more crime in general. However, when looking at the remaining

11 municipalities there can be concluded that more distance to a border leads to less plantations. This can also be substantiated with the fact that southern provinces like Limburg and Brabant, that are also close to the border, show more plantations than other (inland) provinces. It is therefore plausible that the border has a direct influence on the number of found plantations, however there might be stronger influences that indicate this relationship.

The last factor was: '*The presence of a guardian in the municipalities Almelo, Enschede and Hengelo'.* In the municipality of Enschede, the outcome of the correlation analysis shows a positive relationship between the number of community officers and the number of weed plantations. Analysis of the two other municipalities Almelo and Hengelo show insignificant outcomes which means that there is no relationship. However, a positive significant correlation is present in all three municipalities in terms of a relationship between the number of notifications (indications) of plantations and the registered (found) plantations. In short, there is no clear indication for the idea that community officers have a preventive role, but it is indicated that the community officers in Enschede are successful in their repressive work.

Clear plausibility that the number of community officers have influence on the number of weed plantations is lacking, especially with only Enschede showing a significant relationship. Moreover, answering this question is also very hard given the statement that police officers have a direct influence on the found numbers of plantations, which is, according to actors, almost impossible since the number of plantations will not decrease as long as people need money. Preventing plantations is therefore almost the same as preventing poverty. What can be stated is that the number of notifications and the found plantations correlate. Most indications of plantation come from civilians and only sporadic plantations are found by the police. This suggest that the police officers are more repressive and less preventive. Spotting possible plantations in order to find them is done more by civilians than the police. Therefore, it is not very plausible that the number of community officers correlate with the number of plantations, however, there might be a strong correlation between the awareness of civilians and the number of found plantations.

Overall, it seems that the municipalities must be concluded individually to give an answer on the research question: *'What explains the amount of weed plantations in the municipalities Enschede, Almelo and Hengelo?*'. Factors in the municipality Enschede that have a significant relationship with the number of registered plantations are the number of social benefits, non-western ethnicities and community officers. In Almelo, both social as unemployment benefits and both western as non-western ethnicities show a significant correlation. The outcome in

the municipality of Hengelo shows that only the number of unemployment benefits has a correlation with the number of plantations.

VIII - Discussion

This chapter discusses the validity, expectations and limitations of this research. With validity, the question is whether the results are correct with reality. This research has used different variables based on multiple measurement instruments in which the result can be questioned. First, the number of illegal weed plantations in the police registers consists the found plantations, which are according to the average numbers, only 10% of all plantations and according to the energy theft platform 20%. This means that the results are based on a potential 10% a 20% of the total number of plantations, making the results vulnerable for future bias errors. However, no other or better numbers were present, what resulted in choosing the numbers of the police registers. Moreover, the social benefits and unemployment benefits (WWB and WW) are based on number in 2012 and are compared with number over 2015 - 2017. Also, this decision is made because recent numbers were not available. However, it can be stated that, given the current available information, validity is in place and that this research measured what it wanted to measure.

The results of this research did meet various expectations. The actors and the theory stated that social characteristics are factors that can explain the number of plantations. The logical reason for starting a plantation is the simple need for money, which can be linked to having a low income due to a social benefit or unemployment benefit. The results show that the WWB and WW do show a positive relationship with the plantations. Examining the results, this was especially the case in the municipalities Enschede and Almelo were most of the plantations are found. Actors indicated that Enschede and Almelo, due to the disappearing to the textile industry, have more people with a socially weaker background or people with an immigration background. This last factor was also analysed (partially) present in the two municipalities. However, the same results were also expected in the municipality of Hengelo, but most potential significant relationships were not present. It seems that the differences between the municipalities may also suggest that other unknown factors could be present. It is therefore recommended to investigate the municipalities in more inductive approach.

Another expectation was that the border was a major factor for explaining the number of plantations. The idea was that less distance to the border explained more plantations. According to the results this might be true. However, the relationship becomes stronger by leaving out the three major municipalities. This could mean that other factors have more influence in these municipalities or that more plantations are found in these municipalities, because there are more police officers or more notifications of these plantations by civilians. This last idea might be true, duo the fact that the three municipalities are considerably larger

in terms of population than the other eleven municipalities in Twente, which result in possible more officers and more notifications -and thus more registered plantations. This leads to the last idea that guardianship correlates with the number of plantations. Research indicated that the number of community officers have positive relation with the number of plantations in Enschede, but not in Almelo and Hengelo. But, the number of notifications does lead to more found plantations which indicates a repressive role of the police.

Like stated before, it was unfortunate that most recent information was not available. CBS statistics are not always complete or do not show information in the way it can be used correctly. For example, numbers of the WWB and WW over 2017 but are shown per square meter and not per district. Only numbers of 2012 were given per district. Moreover, the police systems like BHV and Bluespot are difficult to interpret because reports are shown in various categories. Therefore, the police showed the best information about the number of illegal weed plantations. Although this was the most recent information possible, it was hard to interpret.

Given the current results, a recommendation to tackle the problem can be stated. The actors, theory and the outcome of this research indicated that social characteristics have a positive and significant relationship with the number of plantations. Furthermore, the border could also be an influencer, but this factor might be hard to tackle. More community officers could lead to finding more plantations, but there are no indications that they can obviate them. To be more preventive, I would suggest investing (and research) in enhancing support and willingness of civilians to report plantations. Hypothetically, creating more support or awareness of people with a low social background could lead to more reports, and thus more findings (or less plantations in total due to the preventive character of this approach). Examples of approaches given from the actors related to this idea are to deliver more preventive information about the dangers (fire, flood, electricity problems) to people who are vulnerable for this crime, and to be stricter when someone is caught. Although it remains unachievable to solve the problem completely, it should be key to make the people resilient in order prevent more illegal weed plantations in the region.

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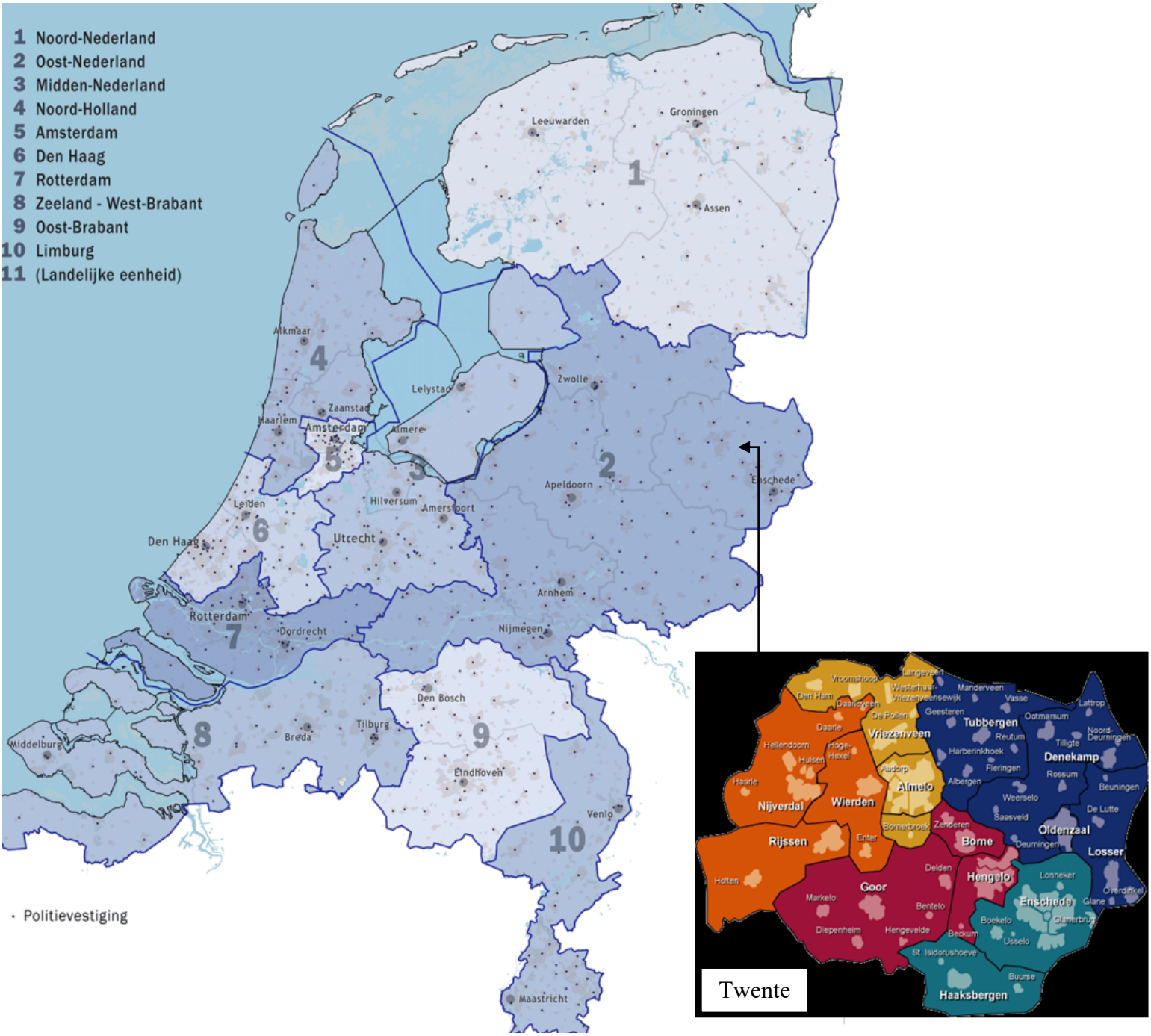
Appendix

Police districts in the Netherlands (and Twente)



Interview format

Topics	Type of possible questions
A Probleemomschrijving	1. Zou u mij meer kunnen vertellen over hennepkwekerijen en de bijbehorende problematiek? 2. In hoeverre zijn illegale hennepkwekerijen vanuit uw organisatie momenteel een probleem?
B Type mensen?	1. Wat voor een type mensen (kijkend naar persoonlijke karakteristieken) zijn vaak betrokken bij de hennepkwekerijen?
C Omgevingsfactoren?	1. Naast de persoonlijk karakteristieken zijn er ook omgevingsfactoren, in welke mate dragen deze factoren bij in de beslissing om een kwekerij op te starten? 2. Hebt u nog andere mogelijke verklaringen anders dan persoonlijke of omgevingsfactoren?
D Aanpak?	1. Wat is de huidige aanpak van de illegale kwekerijen?

SPPS output

Enschede: WWB & WW

Correlations

			EP1000	EWWB
Spearman's rho	EP1000	Correlation Coefficient	1,000	,661*
		Sig. (2-tailed)	.	,038
		N	10	10
	EWWB	Correlation Coefficient	,661*	1,000
		Sig. (2-tailed)	,038	.
		N	10	10

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

			EP1000	EWW
Spearman's rho	EP1000	Correlation Coefficient	1,000	,262
		Sig. (2-tailed)	.	,464
		N	10	10
	EWW	Correlation Coefficient	,262	1,000
		Sig. (2-tailed)	,464	.
		N	10	10

Almelo: WWB & WW

Correlations

			AP1000	AWWB
Spearman's rho	AP1000	Correlation Coefficient	1,000	,806**
		Sig. (2-tailed)	.	,002
		N	13	12
	AWWB	Correlation Coefficient	,806**	1,000
		Sig. (2-tailed)	,002	.
		N	12	12

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

			AP1000	AWW
Spearman's rho	AP1000	Correlation Coefficient	1,000	,929**
		Sig. (2-tailed)	.	,000
		N	13	12
	AWW	Correlation Coefficient	,929**	1,000
		Sig. (2-tailed)	,000	.
		N	12	12

**. Correlation is significant at the 0.01 level (2-tailed).

Hengelo: WWB & WW

Correlations

			HP1000	HWWB
Spearman's rho	HP1000	Correlation Coefficient	1,000	,654*
		Sig. (2-tailed)	.	,040
		N	10	10
	HWWB	Correlation Coefficient	,654*	1,000
		Sig. (2-tailed)	,040	.
		N	10	10

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

			HP1000	HWW
Spearman's rho	HP1000	Correlation Coefficient	1,000	,829**
		Sig. (2-tailed)	.	,003
		N	10	10
	HWW	Correlation Coefficient	,829**	1,000
		Sig. (2-tailed)	,003	.
		N	10	10

**. Correlation is significant at the 0.01 level (2-tailed).

Enschede, Almelo and Hengelo: WWB & WW

Correlations

			ALLP1000	ALLWWB
Spearman's rho	ALLP1000	Correlation Coefficient	1,000	,768**
		Sig. (2-tailed)	.	,000
		N	32	32
	ALLWWB	Correlation Coefficient	,768**	1,000
		Sig. (2-tailed)	,000	.
		N	32	32

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

			ALLP1000	ALLWW
Spearman's rho	ALLP1000	Correlation Coefficient	1,000	,632**
		Sig. (2-tailed)	.	,000
		N	32	32
	ALLWW	Correlation Coefficient	,632**	1,000
		Sig. (2-tailed)	,000	.
		N	32	32

**. Correlation is significant at the 0.01 level (2-tailed).

Enschede: Western and non-western ethnicities

Correlations

			EPL	EWP
Spearman's rho	EPL	Correlation Coefficient	1,000	,531
		Sig. (2-tailed)	.	,114
		N	10	10
	EWP	Correlation Coefficient	,531	1,000
		Sig. (2-tailed)	,114	.
		N	10	10

Correlations

			EPL	ENWP
Spearman's rho	EPL	Correlation Coefficient	1,000	,888**
		Sig. (2-tailed)	.	,001
		N	10	10
	ENWP	Correlation Coefficient	,888**	1,000
		Sig. (2-tailed)	,001	.
		N	10	10

**. Correlation is significant at the 0.01 level (2-tailed).

Almelo: Western and non-western ethnicities

Correlations

			APL	AWP
Spearman's rho	APL	Correlation Coefficient	1,000	,702*
		Sig. (2-tailed)	.	,011
		N	12	12
	AWP	Correlation Coefficient	,702*	1,000
		Sig. (2-tailed)	,011	.
		N	12	12

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

			APL	ANWP
Spearman's rho	APL	Correlation Coefficient	1,000	,880**
		Sig. (2-tailed)	.	,000
		N	12	12
	ANWP	Correlation Coefficient	,880**	1,000
		Sig. (2-tailed)	,000	.
		N	12	12

**. Correlation is significant at the 0.01 level (2-tailed).

Hengelo: Western and non-western ethnicities

Correlations

			HPL	HWP
Spearman's rho	HPL	Correlation Coefficient	1,000	,318
		Sig. (2-tailed)	.	,371
		N	10	10
	HWP	Correlation Coefficient	,318	1,000
		Sig. (2-tailed)	,371	.
		N	10	10

Correlations

			HPL	HNWP
Spearman's rho	HPL	Correlation Coefficient	1,000	,320
		Sig. (2-tailed)	.	,367
		N	10	10
	HNWP	Correlation Coefficient	,320	1,000
		Sig. (2-tailed)	,367	.
		N	10	10

Enschede, Almelo and Hengelo: Western and non-western ethnicities

Correlations

			ALLPL	ALLWP
Spearman's rho	ALLPL	Correlation Coefficient	1,000	,798**
		Sig. (2-tailed)	.	,000
		N	32	32
	ALLWP	Correlation Coefficient	,798**	1,000
		Sig. (2-tailed)	,000	.
		N	32	32

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

			ALLPL	ALLNWP
Spearman's rho	ALLPL	Correlation Coefficient	1,000	,669**
		Sig. (2-tailed)	.	,000
		N	32	32
	ALLNWP	Correlation Coefficient	,669**	1,000
		Sig. (2-tailed)	,000	.
		N	32	32

**. Correlation is significant at the 0.01 level (2-tailed).

Twente: Distance to the border

Correlations

			DKM2	PL1000
Spearman's rho	DKM2	Correlation Coefficient	1,000	-,543*
		Sig. (2-tailed)	.	,045
		N	14	14
	PL1000	Correlation Coefficient	-,543*	1,000
		Sig. (2-tailed)	,045	.
		N	14	14

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

			DKM2MIN	PL1000MIN
Spearman's rho	DKM2MIN	Correlation Coefficient	1,000	-,659*
		Sig. (2-tailed)	.	,027
		N	11	11
	PL1000MIN	Correlation Coefficient	-,659*	1,000
		Sig. (2-tailed)	,027	.
		N	11	11

*. Correlation is significant at the 0.05 level (2-tailed).

Enschede: Notifications and community officers

Correlations

			EPL1	ECOMM
Spearman's rho	EPL1	Correlation Coefficient	1,000	,738*
		Sig. (2-tailed)	.	,015
		N	10	10
	ECOMM	Correlation Coefficient	,738*	1,000
		Sig. (2-tailed)	,015	.
		N	10	10

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

			EPL1	ENOTI
Spearman's rho	EPL1	Correlation Coefficient	1,000	,952**
		Sig. (2-tailed)	.	,000
		N	10	10
	ENOTI	Correlation Coefficient	,952**	1,000
		Sig. (2-tailed)	,000	.
		N	10	10

**. Correlation is significant at the 0.01 level (2-tailed).

Almelo: Notifications and community officers

Correlations

			APL1	ACOMM
Spearman's rho	APL1	Correlation Coefficient	1,000	-,040
		Sig. (2-tailed)	.	,902
		N	12	12
	ACOMM	Correlation Coefficient	-,040	1,000
		Sig. (2-tailed)	,902	.
		N	12	12

Correlations

			APL1	ANOTI
Spearman's rho	APL1	Correlation Coefficient	1,000	,860**
		Sig. (2-tailed)	.	,000
		N	12	12
	ANOTI	Correlation Coefficient	,860**	1,000
		Sig. (2-tailed)	,000	.
		N	12	12

**. Correlation is significant at the 0.01 level (2-tailed).

Hengelo: Notifications and community officer

Correlations

			HPL1	HCOMM
Spearman's rho	HPL1	Correlation Coefficient	1,000	-,118
		Sig. (2-tailed)	.	,746
		N	10	10
	HCOMM	Correlation Coefficient	-,118	1,000
		Sig. (2-tailed)	,746	.
		N	10	10

Correlations

			HPL1	HNOTI
Spearman's rho	HPL1	Correlation Coefficient	1,000	,652*
		Sig. (2-tailed)	.	,041
		N	10	10
	HNOTI	Correlation Coefficient	,652*	1,000
		Sig. (2-tailed)	,041	.
		N	10	10

*. Correlation is significant at the 0.05 level (2-tailed).