

Bachelor thesis

European Public Administration

# **Drones' Deployment by FRONTEX and Fundamental Rights and Civil Liberties**

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Submission: 2. July 2014

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I declare that the bachelor thesis submitted here was in all parts exclusively prepared on my own, and that any other resources or other means (including electronic media and online sources), than those explicitly referred to, have not been used.

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Kamila Krajčiková

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Place, Date

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Signature

## **Abstract**

To the wide public, drones are known mainly in the context of combat zone. Nowadays, their application is being introduced also into the civil airspace. The European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union (Frontex) and several southern EU member states consider the drones' deployment or even deployed them already for the surveillance of the EU' southern external maritime borders to combat cross-border crime and illegal migration or to safe migrants' lives.

Presented thesis introduces the situation at the EU' southern maritime border giving regard to the problems of big migrant inflows. The activities of Frontex and of the EU on drones since 2007 are also in detail mapped, and according to that the thesis tries to indicate the possible design of the for-real deployment of drones at the EU' southern border. The main part of the thesis analyses the potential impact of drones' deployment on the civil liberties and fundamental rights driving also focus to the cooperation between the member states, Frontex and non-EU countries.

The drones' deployment seems to be the reality of the near future. The thesis, however, finds that, though the serious situation at the southern borders, the threats imposed by the drones' deployment to civil liberties and fundamental rights are too wide to sacrifice the objectives of their deployment. The current legal framework, mainly on data protection, does not clearly address the possibility of drones for border surveillance, lacks instruments for effective search and rescue operations, and does not sufficiently protect fundamental rights and civil liberties making the use of various exceptions possible. Drones would therefore serve more security related objectives than the humanitarian ones.

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## Abbreviations

CPIP	Common Pre-Frontier Intelligence Picture
EC	European Commission
ECHR	European Court of Human Rights
ECJ	European Court of Justice
EP	The Parliament of the European Union
EU	European Union
EU Charter	Charter of Fundamental Rights of the European Union
European Convention	European Convention on Human Rights
EUROSUR	European Border Surveillance System
FP7	Seventh Framework Programme for Research and Technological Development
FRA	European Union Agency for Fundamental Rights
FRONTEX	European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union
ICAO	International Civil Aviation Organization
JO	Joint Operation
MALE	Medium Altitude Long Endurance
MS	Member State of the European Union
NCC	National Coordination Centre
NGO	Non-Governmental Organization
OPA	Optionally Piloted Aircraft
OPARUS	Open Architecture for UAV-based Surveillance System
OPV	Optionally Piloted Vehicle
R&D	Research and Development
RPA	Remotely Piloted Aircraft
RPAS	Remotely Piloted Aircraft Systems
SAR	Search and Rescue
SBC	Schengen Borders Code
TC	Third Country
TEP	Technical Equipment Pool
TEU	Treaty on the European Union
TFEU	Treaty on the Functioning of the European Union
UAS	Unmanned Aerial Systems
UAV	Unmanned Aerial Vehicle
UNHCR	United Nations High Commissioner for Refugees
VLOS	Visual Line-of-Sight

## 1. Introduction

Drones, technically known as unmanned aerial vehicles (UAV), remotely piloted aircraft systems (RPAS) or optionally piloted aircraft (OPA), are known to the public mainly in the context of the war in Afghanistan and from the “targeted killing” operations. Nevertheless, their use is much broader; their application can also be found outside the combat zone. For border surveillance this technology is used mainly in Canada and USA. Nevertheless, the deployment of drones hugely challenges the civil liberties enacted by domestic and international law, e.g. privacy rights (privacy of persons, personal behaviour and data), and fundamental rights of migrants, e.g. the right to emigrate and seek asylum in another country its own (Finn & Wright, 2012; Trevisanut, 2009). Still, even the European Union (EU) considers applying drones for the surveillance of its external borders for even better border management. The European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union (Frontex) has shown the big interest in the application of drones for border surveillance in the European Union (Kenk, Križaj, Štruc, & Dobrišek, 2013). Regarding the controversies of the civil and military use of drones as well as criticism on Frontex’ activities in the past (mainly in the context of interception and diversion of migrants), this is a very interesting and important topic to engage in.

Firstly, the situation at the southern border of the EU will be introduced. After that, the thesis will map the activities of Frontex on drones since 2007. This is important because there have not yet been many drones deployed for border surveillance in Europe and these activities can possibly indicate how drones can be used particularly at the European borders. With the identification of the possible mode of drones’ application in EU, the next step of the thesis will be the assessment of the potential impacts of the deployment of drones on the border surveillance and on the civil liberties and fundamental rights of migrants. Also, the thesis will drive focus on the cooperation of Frontex with the third countries, i.e. non-EU countries, aiming at regulating the unauthorised migration that is currently quite broad. Hypothetically, information collected by drones could also be involved in the cooperation between these Frontex and the other (also non-EU) states for even more effective border management. Therefore, the thesis will take into consideration the issues that this cooperation might trigger with regard to the often unsound legal systems of the third countries and the threat it poses to the fundamental rights of migrants.

The deployment of drones for border surveillance has been mainly studied in the context of North America where the drones’ application is wide and well documented. The environment of the EU has not yet been addressed in the scientific literature because the use of such technology in the EU is still limited. Regarding the EU and border surveillance, most of the scientific literature engages with topics of securitization and militarisation of migration controls in relation to FRONTEX or EUROSUR (Dünnwald, 2011; Léonard, 2010) or discusses new technologies for border management mentioning regulatory issues of drones’ deployment for border surveillance only peripheral (Kenk, Križaj, Štruc, & Dobrišek, 2013; Nolin, 2012; Collett, 2011; Finn & Wright, 2012; Marin, 2011a; Papademetriou & Collett, 2011). On the other hand, literature about the cooperation of the EU with the third countries (TCs) and the possible legal difficulties (European Union Agency for Fundamental Rights, 2013; Carling & Hernández-Carretero, 2011; Trevisanut, 2009). Unlike, the topic of information collected by drones and their possible sharing in the context of cooperation with TCs was not yet fully addressed in the literature. It can therefore be concluded that the bachelor thesis would engage with topics not yet fully addressed in the scientific literature, concentrating on drones’ deployment for border surveillance in EU’s southern borders and the cooperation with third countries in the context of the drones’ application.

### 1.1 Research Questions

The main research question to be answered in the bachelor thesis is formulated like this:

(RQ) “To what extent does the deployment of drones for the surveillance of the southern borders of the European Union by Frontex challenge civil liberties and fundamental rights as included in the EU Charter and European Convention?”

To give a complex overview of the context of EU's border surveillance and the activities on drones' application and to answer this main research question in a context-sensitive manner, the other sub-questions are necessary to be answered:

(SQ1) "What are the main activities of Frontex on drones' deployment for the border surveillance since 2007?"

(SQ2) "How could the deployment of drones by Frontex at the EU's southern borders look like?"

(SQ3) "How would the deployment of drones at the EU's southern borders affect the border surveillance in legal terms?"

(SQ4) "Which civil liberties and fundamental rights as cited in the EU Charter and the European Convention are challenged by the application of drones for border surveillance?"

(SQ5) "How would the deployment of drones by Frontex change the cooperation with third countries on the activities of regulating unauthorised migration through sharing of information collected by the Agency at the borders regarding the legal systems of third countries and the civil liberties that can be challenged by this cooperation?"

## 1.2 Concepts

As the research will concentrate mainly on drones, it is therefore, in the first instance, necessary to precisely define what is meant by drones in the thesis. The drones actually constitute a wide range of aircraft surveillance technology without a man on board and their size can reach from a size of an insect to a size of a charter flight (Finn & Wright, 2012). Technically, they are known as UAV (fully automated), remotely piloted vehicles (RPV), that are remotely piloted by a ground control operator, or OPA, that can be flown with or without a man on board. In conjunction with their ground sending system, they are known as unmanned aerial systems (UAS) or remotely piloted aircraft systems (RPAS). The thesis will engage only with drones applied for civil purposes of border management. Also, drones carrying lethal and non-lethal weapons are out of the scope of the research, unless there will be found indices in the empirical research that Frontex want to deploy such drones for border surveillance in Europe.

In the research, by the activities of Frontex on drones, one understands activities, like workshops, seminars and conferences on drones-technology held by or with participation of Frontex, research and development of surveillance technologies in areas of drone-technology initiated by or with engagement of Frontex, plans and projects of Frontex on drones.

Another important term that has to be defined clearly is "border surveillance". According to Art. 2(11) of the Schengen Borders Code (SBC), border surveillance is defined as "the surveillance of borders between border crossing points and the surveillance of border crossing points outside the fixed opening hours, in order to prevent persons from circumventing border checks" (Schengen Borders Code, 2006). To limit the scope of the thesis, the research will concentrate purely on the surveillance of southern borders of the EU.

Other concept to appear frequently in the bachelor thesis will be "unauthorised migrants", who can be defined as migrants that want to "enter the European territory without permission" (Carling & Hernández-Carretero, 2011, p. 43). Accordingly, the term of "illegal" migration is not correct, as some of these migrants wanting to reach Europe do this with the purpose to find a protection from persecution which is not illegal (Carling & Hernández-Carretero, 2011).

The concept of civil liberties is rather broad. In general, civil liberties mean various personal rights and freedoms. The scope of these rights and freedoms can vary across countries. According to the Oxford Dictionary civil liberties are "person's rights to be subject only to laws established for the good of the community" (Oxford University Press, 2014a). The thesis concentrate on the analyses and assessment of the impacts concentrate on some of the articles of the Charter of Fundamental Rights of the European Union (EU Charter) the scope of which could be threatened by the drones' deployment at EU southern borders. To these we can count the rights and freedoms codified in the Chapter II of the EU Charter. The EU Charter can be enhanced also by the European Convention on Human Rights



(European Convention), mainly by the Section I of the European Convention and Protocol No. 4 of the European Convention.

Because the thesis will have a substantial legal dimension it is necessary to define core legal concepts applied in the analyses. These will guide the research in the assessment of the impact of drones for border surveillance in Europe, i.e. lead the argumentation and test the impacts. The first concept, the principle of proportionality, is considered as the gold standard of constitutional review of state action.<sup>1</sup> The principle of proportionality is codified in the Art. 5 in the Treaty of the European Union (TEU) and addressed in detail in the Protocol No. 2 on the application of the principles of subsidiarity and proportionality. In the context of EU law, the assessment whether an act is proportionate or not is a test when an appropriate measure that pursues a legitimate objective was chosen and when it concurrently constitutes the least restrictive measure that could be chosen to achieve the objective; moreover, the measure must not evidently imbalance the costs and benefits (Sauter, 2013).

Another legal concept applied in the bachelor thesis will be the rule of law. This is one of the founding values of the European Union as codified in the Art. 2 TEU. The rule of law as a constitutional principle was recently emphasized by the ECJ in the case of *Yassin Abdullah Kadi and Al Barakaat International Foundation v. Council and the European Commission* in 2008. In the context of EU law, the principle says that “every action taken by the EU is founded on treaties that have been approved voluntarily and democratically by all EU member countries” (European Union). A legal connotation of this principle entails the legal certainty as fundamental question of protection for the reliance on the existing law. Accordingly, the state’s acts have to be foreseeable and predictable. The law has to be clear and precise and there is an absolute prohibition of ex post facto laws.

Another founding value of the European Union is the respect for human rights. These are codified in the EU Charter that has become legally binding with the Lisbon Treaty (Art. 6(1) TEU), therefore all acts of the EU as well as MSs have to be in line with the fundamental rights. The Charter has its foundations in the Convention for Protection of Human Rights and Fundamental Freedoms, “the meaning and scope of those rights shall be the same as those laid down in the said Convention” (Art. 52(3) EU Charter). Therefore, the case law of the European Court of Human Rights can be applied to the some extent. According to the court in case *Handyside v United Kingdom* in 1976, an interference with a right can be justified on the ground of necessity, i.e. if the measure “answers a pressing social need, if it is proportionate to the aim pursued, and if the reasons put forward by the public authority to justify it is relevant and sufficient” (Hayes & Vermeulen, 2012, p. 47).

### 1.3 Research Method

The bachelor thesis will constitute a legal research based on the legal provisions and case law of the EU. To provide the context to the law, also a descriptive question has to be answered, namely the question about activities of Frontex on drones, including various projects and studies. The collection of the data for this part of the research will not be too difficult as all European institutions’ documents are made public on the internet because the people have the right to access the documents produced by European institutions. This includes a wide range of databases on EU financed activities (projects, studies, etc.) like the Financial Transparency System or the Transparency Register etc. Moreover, Frontex, even being an EU’s agency and not an institution, is also a subject to the Regulation No 1049/2001 regarding the public access to documents (FRONTEX, 2006). I will therefore collect as much information as possible about the activities of Frontex on drones, summarize them and try to identify possible ways how drones could be applied on European southern borders according to the results of the various projects/ studies / workshops on drones. Also, the research will engage with the question whether Frontex intends an acquisition of its own drones.

Nevertheless, the research design is an interdisciplinary legal research, also concerning issues within the EU’s migration policy to achieve a more complex view in one specific situation of drones’ application on European southern borders. This type of research is called law reform research or socio-

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<sup>1</sup> Regarding the context of the EU, this principle has been derived from the national laws of the member states of the EU, nevertheless, resulting from the case law of the European Court of Justice (ECJ), the EU Treaties are nowadays regarded as having constitutional characteristics (Sauter, 2013). The principle in EU law is applied to acts of member state as well as acts of the EU itself. The first association of proportionality principle in EU law was in the cases of *Internationale Handelsgesellschaft* in 1970 and *Cassis de Dijon* in 1979.

legal research studying law in context (Chynoweth, 2008). This approach is very suitable for identifying possibilities for future change because it applies to a specific situation in a broader context and usually more understandable for non-lawyers. Another advantage of this research approach is that it does not only question the law itself, but also the political, philosophical and moral background of that law (Chynoweth, 2008). A disadvantage of such a research approach is the difficulty of including the legal concepts into the socio-empirical surroundings as well as the matter of the integration of empirical data within the legal part of the research (Schrama, 2011). These disadvantages are even multiplied by the fact that the general legal principles applied in the research are very broad and can be interpreted in more than one way, even after a well-founded scientific and legal definition at the start of the research with the aim to reduce possible misunderstandings. This poses a risk if a rule can be applied to that particular situation. To counter these disadvantages, interpretations of general rules by current case law and eventually the same patterns of reasoning used by the European judiciary will be used if possible. Moreover, to counter the possible disadvantages to validity of the research a well-founded selection of units, time, variables and settings is to be drawn to limit a huge scale of information which the topic can involve. Furthermore, the research questions have to be as clear and detailed as possible.

To answer the research questions in a context-sensitive manner, the bachelor thesis will use so called triangle structure, going from general to very specific with the help of sub-questions.

#### **1.4 Case selection and operationalization**

The unit studied in this research is Frontex. This EU's agency was chosen as a good representative for the Union's border surveillance policy because it is an agency aiming at the cooperation of the EU's member states (MSs) in the management of the external borders of the EU.

The geographical area of the southern borders (the Mediterranean borders with Africa) was chosen because of the sensitivity of this area for migration into EU. Europe experiences situations where migrants try to reach the EU, often on unseaworthy boats causing a lot of accidents and deaths at sea. Although, the number of these migrants, compared with the migrants reaching Europe by air or land, is very small, statistics show that most of the people trying to reach Europe by sea disappear or die on the way (Marin, 2011b). Another reason for the choice of this area is the increasing debate about securitization and militarisation of migration. In Europe, unauthorised migration is seen as a threat to Europe (Dünnwald, 2011; Carling & Hernández-Carretero, 2011). The EU is investing huge amounts of money in new electronic systems for border control (Visa Information System, Schengen Information System, Passenger Name Record, Entry-Exit System) and in maritime surveillance of southern borders. For example operations and projects of Frontex on sea borders are almost three times higher than for operations on land borders (FRONTEX, 2013b).

Another reason for the choice is that this maritime border is harder to control because states cannot build fences to prevent people from reaching the shores. The states have to use coast guards on boats or helicopters to monitor wide areas, which consumes a lot of time and human resources. The efficiency and effectiveness of various border management operations are also hugely reliant upon the sea and weather conditions. Drones can therefore be a cost-efficient way to monitor wide maritime areas of the Mediterranean (Tares, Greidanus, Jurquet, & Helie, 2009).

In the thesis various data as well as data from different sources will be used, sometimes coming from opposing positions. To identify the real state of situation on drones' projects for border surveillance in Europe the data will include newspaper articles, reports of NGOs, official reports of Frontex and other EU institutions, hearings of Executive Director of Frontex in the European Parliament, and possibly interviews of Frontex' officials. Also, there is a high potential to find data on project on drones' application at the website of the Seventh Framework Programme for Research and Technological Development (FP7) financed by the European Commission that aims to support research and innovation in the EU, as well as introducing new technologies for the border management that can be used by Frontex. Collecting information from various sources can lead to data inconsistencies and therefore to unreliable information. To counter this threat, the data will be systematically structured regarding held information and the reliability of the source. Subsequently, comparisons between the sources and information will be made. Definite conclusion will be based only on data approved by different sources.

In order to answer the research questions an intense study of various legal documents will be necessary. In the analyses and assessment of the impacts, the thesis will concentrate on some of the articles of the Charter of Fundamental Rights of the European Union (EU Charter) the scope of which could be threatened by the drones' deployment at EU southern borders. To these we can count the rights and freedoms codified in the Chapter II of the EU Charter<sup>2</sup>. The EU Charter can be enhanced also by the European Convention on Human Rights (European Convention), mainly by the Section I of the European Convention<sup>3</sup> and Protocol No. 4 of the European Convention<sup>4</sup>. Other legal sources could enhance these conclusions, e.g. the primary law of the European Union, i.e. Treaty of the European Union (TEU), Treaty on the Functioning of the European Union (TFEU) and the EU Charter. Another important source of current legal provisions for the thesis is the legal framework of Frontex, i.e. the Frontex Regulation, RABIT Regulation and the Schengen Borders Code, because they indicate how far (legally) Frontex can go in its possible activities on drones. Concerning possible infringements of the right of privacy, the Data Protection Directive will be studied, that is *lex specialis* to the general right to privacy. Complementary, the case law of ECJ and the European Court for Human Rights concerning the interpretation and scope of civil liberties and their respect in border surveillance activities will be studied.

Also, relevant legal provisions and judgements on the international and EU law related to border surveillance and drones will be studied as well as relevant academic articles. In addition, for the impact assessment of drones official reports of the EU institutions will be addressed as well as those from well-established NGOs and independent media. The research will therefore mainly use qualitative data, trying to exploit original data from primary sources and combining it with the existing dataset given by the scientific literature.

### 1.5 Social and Scientific Relevance

The topic of drones' deployment for border surveillance in Europe has not yet to be fully addressed by the scientific literature. The thesis can therefore bring an impulse for further research promoting clear, broad discussion on the drones-technology, identifying advantages and drawbacks before the actual (political) decision about its application in Europe.

In a broader sense, the topic of the bachelor thesis also has a big social relevance. On the one hand, this is because of the possible infringements of civil liberties by the deployment of drones on and behind EU borders as well as its possible negative impacts on migrants and refugees when sharing the information collected with third countries where the civil rights are often not fully protected. On the other hand, the topic has a substantial social relevance also for EU citizens due to EU's heavy expenditures for projects analysing different aspects of the drones' application in Europe. These projects are currently financed under the FP7 with a planned budget of EUR 51 billion for the period 2007-2013 (Hayes, Jones, & Töpfer, Eurodrones Inc., 2014) as well as due to increasing Frontex' budget.

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<sup>2</sup> The Chapter II of the EU Charter includes following rights: right to liberty and security; respect for private and family life; protection of personal data; right to marry and right to found a family; freedom of thought, conscience and religion; freedom of expression and information; freedom of assembly and of association; freedom of the arts and sciences; right to education; freedom to choose and occupation and right to engage in work; freedom to conduct a business; right to property; right to asylum; protection in the event of removal, expulsion or extradition (Charter of Fundamental Rights of the European Union, 2000, pp. 10-12).

<sup>3</sup> The Section I of the European Convention consist of these rights: right to life; prohibition of torture; prohibition of slavery and forced labour; right to liberty and security; right to a fair trial; no punishment without law; right to respect for private and family life; freedom of thought, conscience and religion; freedom of expression; freedom of assembly and association; right to marry; right to an effective remedy; prohibition of discrimination; derogation in time of emergency; restrictions on political activity of aliens; prohibition of abuse of rights; limitation on use of restrictions on rights (European Convention on Human Rights, 2010, pp. 6-14).

<sup>4</sup> In the Protocol No. 4 of the European Convention belong these rights: prohibition of imprisonment for debt; freedom of movement; prohibition of expulsion of nationals; prohibition of collective expulsion of aliens; territorial application; relationship to the Convention; signature and ratification (European Convention on Human Rights, 2010, pp. 34-37).

## 2. Management of Migration in Europe

Europe is worldwide considered as a leading economic and democratic power. It is in itself a prosperous opportunity for the hopes and plans of people from other non-EU countries that are fleeing from persecution, war, or a bad economic situation, lack of work and education opportunities or climatic conditions. No one assumes that these migration flows to Europe will stop in the future. One reason for this is the clear asymmetry that defines the relationship between the EU and its neighbours (Wolff, 2008). The levels of migration to the EU are dependent on various developments around the world, therefore not stably increasing or decreasing (Czaika & De Haas, 2013). Nevertheless, some EU countries are more affected by migration flows than others. This is particularly a phenomenon of the southern EU countries regarding unauthorised migration by sea, although this way constitutes only a marginal part of migration to the EU, i.e. 7 % of third country nationals travelling to EU crossed the maritime border in 2009 (FRA, 2013, p. 19).

Firstly, this chapter provides an answer to the question why the southern maritime border has gained special importance in the European environment of border management despite this low number. Next, Frontex will be introduced as well as its role in the management of the external borders, mainly regarding the current challenges of managing the unauthorised migration to the EU by sea. The last part of the chapter maps the activities of Frontex on drones for border surveillance and gives the possible design of the potential deployment of drones at the southern EU borders by the Agency<sup>5</sup>.

### 2.1 Situation of Migration on the Mediterranean Border

The Mediterranean Sea is one of the busiest seaways in the world. For unauthorised migrants it constitutes one of the most dangerous ways how to get to the EU. Among the EU southern countries most affected by unauthorised migration by sea are Italy, Spain, Malta and Greece (see Fig. 1). Considering the situation of Italy, the highest peak of spontaneous arrivals and people rescued at sea was registered right after the outbreak of so called Arab Spring in 2011, by Malta and Greece in 2008 and by migration to Spain the peak was in 2006 (FRA, 2013, p. 21). This indicates that the routes of unauthorised migrants travelling by sea change over time depending on different patrolling and other border management activities of the member states of the European Union (MSs) as well as the developments in the states of the migrants' origin. Migrants mainly head to small islands near the African coast like Malta, Spanish Canary Islands, Italian Lampedusa and Pantelleria or Greek Lesbos, Chios, Leros and Kos (FRA, 2013). Though the total number of migrants crossing the southern maritime border of the EU constitutes only a small part of the overall migration to the Union, the southern maritime border still constitutes nearly a half of the maritime borders of the EU (House of Lords - European Union Committee, 2008). In 2011 about 70 000, and in 2012 20 000 people from third countries crossed the Mediterranean (see Fig. 1). In 2013, the top nationalities representing the highest number of detected illegal sea border crossing between the border control points were Syrians, Eritreans, Afghans, Nigerians and Somalis (FRONTEX, 2014c, p. 13).

Unfortunately, the southern MSs gain the highest publicity mainly in the context of overcrowded migration facilities or Search-and-Rescue (SAR) operations of unauthorised migrants from North Africa. These migrants often sail on board of overcrowded, unseaworthy vessels lacking ship pilot and swimming skills and often die on their journey to Europe due to drowning, dehydration or starvation (FRA, 2013). These unfortunate incidents are those which attract the interest of the media the most, not only locally but internationally. In recent years, there were several international media (BBC News, Focus Online, The Guardian, New York Times, etc.) reporting about incidents of hundreds of migrants dying at sea while trying to reach Europe (Focus Online, 2013; BBC News, 2013; McIntyre, 2012; Pianigiani, 2011). On 3th October 2013, a ship carrying more than 500 migrants from Africa sank as fire took the ship and the boat collapsed as panic started between the passengers; this resulted in about 360 people found dead by the Coast Guards in the water (Coppens, 2013). The United Nations High Commissioner for Refugees (UNHCR) estimated that more than 1500 migrants died or went missing at sea while trying to reach Europe only in 2011 (UNHCR, 2012). The scholars of the European University Institute, Florence, estimated even 2099 persons for the same year as missing or dead in the Mediterranean (De Bruycker, Di Bartolomeo, & Fargues, 2013, p. 19). Since January 1993 till November 2012 it is estimated that about 17 000 migrants and refugees died or went missing in the

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<sup>5</sup> The term "Agency" substitutes the designation of Frontex.

Mediterranean Sea (UNITED for Intercultural Action, 2012). By the UNHCR the Mediterranean was declared the most deadly water area for refugees and migrants in 2011 (UNHCR, 2012) with 26.3 probability of dying in 2011 (De Bruycker, Di Bartolomeo, & Fargues, 2013, p. 19). However, the exact numbers are hard to determine because the statistics of the MSs usually incorporate only dead found in the sea by the authorities of the MSs. The estimates of the overall dead and missing are therefore also based on interviews with migrants who successfully reached the European soil by boat. Particularly, these death cases are one of the most cited rationales for MSs' and Frontex' border operations, i.e. the border management measures taken are often justified with the argument to save migrants' lives (Carling & Hernández-Carretero, 2011; Hayes & Vermeulen, 2012; Marin, 2013; Perkowski, 2012). Some of these measures received a high criticism as being not fully in line with the fundamental rights of migrants and of refugees, e.g. push-backs by the MSs carried out on the basis of bilateral agreements between a MS and a third country.<sup>6</sup> Frontex denied to be part of these activities but at the same time, for example, the bilateral agreements Spain-Senegal and Spain-Mauritania were included in the joint operations (JOs) Hera II and III (Heijer, 2011; Holzhacker & Luif, 2014). Moreover, the Agency claimed success of the JO Nautilus carried out by Frontex as well as operations carried out by Italy and Malta in the same area on the basis of national bilateral agreements with Libya where interceptions also took place; for such an evaluation Frontex must have been provided with knowledge what was happening in the area (Holzhacker & Luif, 2014). This raises distrust among the scholars whether Frontex was really not involved in those interception and diversion policies as it claims (Holzhacker & Luif, 2014; Marin, 2011b; Trevisanut, 2009). According to many scholars, the concerns about the respect for human rights in the sea operations rise due to the fact that migration is still being perceived as security threat (Marin, 2013; Dünnwald, 2011; Carling & Hernández-Carretero, 2011). This was also confirmed by the Special Rapporteur on the Human Rights of Migrants Francois Crépeau in his report: many states consider migration as “*a national security problem or a criminal issue*” (Crépeau, 2012, p. 4). Therefore, the objective to assure the internal security is viewed as to justify the measures. Moreover, migration is a hot and sensitive political topic that can have a decisive effect in national elections, although, the intensity of the political discourse does not correspond with the numbers in immigration (Crépeau, 2013; Dünnwald, 2011). Though migration control is mainly a matter of individual MSs (Carling & Hernández-Carretero, 2011), the EU tries to involve and cooperate the actions and policies of MSs on the common external borders. One of the ways how to achieve this goal was through the establishment of Frontex.

## **2.2 The Aim of Frontex's Establishment and its Role in EU's Border Management**

*“National borders are hugely symbolic. They define the territory over which a state exercises sovereignty; they are an integral part of its identity; and they traditionally represent the point at which a person seeking to enter the country must demonstrate their admissibility”* (House of Lords - European Union Committee, 2003). With the Schengen Convention internal borders within the EU practically disappeared. The attention then shifted towards the external borders of the Union because of the blurring of internal and external borders (Wolff, 2008). Nowadays, each MS has to rely on the other's security of its border controls; the duty to secure the border is no more a national issue but is owed to all states within the Schengen area (House of Lords - European Union Committee, 2008). As soon as a person manages to be on EU territory, it is hard to follow him/her or even expel him/her.<sup>7</sup>

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<sup>6</sup> These diversion and interception practices were carried out for example by Italy or Spain on the basis of bilateral agreements with third countries (Italy-Libya, Spain-Marocco/ Mauritania/ Senegal) (European Union Agency for Fundamental Rights, 2013; Heijer, 2011). These agreements also allowed the MS to join the national border patrols and participate in the surveillance of those third states' territorial waters (Heijer, 2011). The criticism of these practices involves mainly that these activities actually are against the international refugee law, i.e. they constitute a breach to non-refoulement principle (Marin, 2011b) that no state should “expel or return (“refouler”) a refugee in any manner whatsoever to the frontiers of territories where his/her life or freedom would be threatened on account of his/her race, religion, nationality, membership of a particular social group or political opinion” (Convention and Protocol Relating to the Status of Refugees, 1951, p. 30). These practices were challenged before the European Court of Justice in case *Hirsi Jamaa and Others v. Italy* (Case of *Hirsi Jamaa and Others v. Italy*, 2012).

<sup>7</sup> This is indicated by a high number of so called “overstayers”. These people entered the EU legally in the past but their visas are not valid anymore and they still find themselves on the territory of one of the MS. This group

The size of the area of the EU's external borders and the differences in legal systems, jurisdictions and cultures of the MSs, make the border management very complex. To secure the cooperation and coordination between the MSs' migration management institutions and agencies, as well as to provide an instrument for stronger convergence in the area of management of external borders, the EU established Frontex (Marin, 2011b; Crépeau, 2013).

Frontex is an agency with a common operational structure founded with the Regulation 2007/2004 (Frontex Regulation) in the year 2004 and became operational on 1 May 2005 (Council of the European Union, European Parliament, 2004). Its head seats in Warsaw, Poland (Council of the European Union, 2005). The Regulation 2007/2004 (Frontex Regulation) was amended in 2011 through Regulation 1168/2011 (amended Frontex Regulation), and with the SBC and the Regulation 863/2007 (RABIT Regulation) has built the common legal framework for Frontex (Marin, 2011a). The art. 2(1) of the Frontex Regulation sets out six main tasks of the Agency:

- a) *Coordinate operational cooperation between Member States in the field of management of external borders;*
- b) *Assist Member States on training of national border guards, including the establishment of common training standards;*
- c) *Carry out risk analyses;*
- d) *Follow up on the development of research relevant for the control and surveillance of external borders;*
- e) *Assist Member States in circumstance requiring increased technical and operational assistance at external borders;*
- f) *Provide Member States with the necessary support in organising joint return operations* (Council of the European Union, European Parliament, 2004).

For this research, the points a), d) and e) will be of main interest. The Agency is growing not only in staff but also in budget and competences. At the beginning in the year 2005, Frontex' staff amounted of 57 persons with the Agency's budget of 6.280 Mio Euro and in 2012, there were 304 employees manipulating with a budget of 89.587 Mio EUR (see Fig. 2 and Fig. 3). To its budget contribute the MSs but the vast majority comes via the Commission of the European Union. Similar to all EU agencies and institutions, also Frontex is also a subject to financial and activity supervision. The Parliament of the European Union (EP) votes on the Agency's budget and has competences to control the work of the Agency, e.g. through inviting the Executive Director of Frontex to a parliamentary hearing to answer questions about the activities of Frontex. Moreover, every year Frontex has to publish an annual report, sent it to the Commission, Council and EP (House of Lords - European Union Committee, 2008). During the years, Frontex has also received new competences mainly by the RABIT Regulation and by the amended Frontex Regulation. Frontex has now competence in deploying rapid-reaction intervention teams to provide enhanced technical and operational assistance in case of an urgent and exceptional situation, or the competence to purchase its own equipment. Frontex has a strong operational dimension (Marin, 2011b). Not surprisingly, the operational to administration expenses ratio is 67:33 (FRONTEX, 2013a). The core activities of Frontex represent the joint operations, pilot projects and conducting risk analyses (Dünnwald, 2011). In the long term, the operations and projects at the sea borders constitute the biggest part of the operational budget (FRONTEX, 2013b; House of Lords - European Union Committee, 2008). On one hand, some doubt the proportionality of the resources involved in these operations as well as their effectiveness as the migration by sea constitutes only a marginal part of the overall entry ways to the EU and is driven by structural factors as economic and political situation in the migrants' states of origin (Marin, 2011b; Czaika & De Haas, 2013). On the other hand, the operations can be justified by the high number of the missing and the dead in the Mediterranean as one of the main objectives for these activities is to save migrants' lives and combat cross-border crime such as human trafficking in human beings. As stated in the Agency's General Report 2012, Frontex sees itself as a "*trustworthy European Border Agency, strengthening the European Area of Freedom, Security and Justice by supporting the Member States*

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constitute the largest category of illegal migrants within EU (Hayes & Vermeulen, 2012; Kenk, Križaj, Štruc, & Dobrišek, 2013).

*to keep up with their responsibilities*” (FRONTEX, 2013a, p. 7). This indicates that Frontex serves multiple objectives not only at the sea borders: detecting and preventing cross-border crime (human trafficking, drug smuggling, etc.), securing the borders from pollution, illegal fishing, etc., as well as detecting and preventing unauthorised migration, and therefore saves lives of migrants (FRONTEX, 2014a; Carling & Hernández-Carretero, 2011; European Commission, 2011). While according to the Frontex Regulation (art. 1(2) ) the general responsibility for and leadership of operations with the involvement of Frontex lies with the MSs, the Agency is in charge of coordinating the action of the involved MSs, organising the equipment, material and staff from its own or MSs’ supplies (Council of the European Union, European Parliament, 2004; Dünnwald, 2011). On the other hand, Frontex disposes of own legal autonomy and is therefore an independent actor. Throughout the years, its powers and competences have been increased. However, the ability and capacity of Frontex to push the MSs to a certain practice or action is very limited as the Agency is controlled by the MSs (Perkowski, 2012). Namely, the Management Board controlling the functioning of the Agency consists of the representatives of the national border management authorities of the 26 MSs that are part of the Schengen area (FRONTEX, 2014g). This limitation in Frontex’ power to coordinate action between the MSs was also shown also in the Salamis case. There, in 2013 a tanker Salamis sailing under the Liberian flag rescued 102 migrants near Libya and Italy, coordinating the SAR operation, ordered the shipmaster to disembark these migrants in Libya as this was considered to be the nearest safe harbour. However, the shipmaster refused to do so and continued on his previously intended journey to Malta where he wanted to disembark the migrants but Maltese authorities denied the tanker access into their territorial waters. The vessel found itself in an impasse not wanting to go back to Libya and not being allowed to Malta. After a lengthy process, the Greek-owned tanker was permitted access to Italy to disembark the migrants there and by doing so avoided a possible humanitarian crisis (Balzan & Dalli, 2013; Balzan, 2013). In relation to this and similar cases, in October 2012 the Executive Director of Frontex, Ilkka Laitinen, claimed in front of the Civil Liberties, Justice and Home Affairs (LIBE) Committee that the Agency has no mandate for SAR as this remains the responsibility of the MSs and the Agency stands on for this (Statewatch, 2012). Moreover, this supported also by the Council in its statement about the EUROSUR Regulation (EUROSUR Regulation, 2013).

Frontex applies a very broad definition of border surveillance (Marin, 2013). Namely, powers were given to Frontex to help in cooperation between TCs and MSs to secure the borders from crimes and prevent unauthorised migration (Amended Frontex Regulation, 2011). With TCs, the Agency already signed couple of working arrangements that usually involve development of activities between the Agency and the TCs in the fields of information exchange and risk analyses, training and R&D related to border management, elaboration and coordination of joint operational measures and pilot projects on border control (FRONTEX, 2014d).<sup>8</sup> These working arrangements can be considered as the first, necessary step towards the actual future cooperation in combating cross-border crime in the Mediterranean. Nevertheless, the only working arrangement with TC on the southern European borders is the arrangement with Turkey. It is more common that individual MSs cooperate with TCs on the basis of own bilateral agreements that are often kept secret. But Frontex plans further arrangements with Morocco, Egypt, Tunisia, Libya, Mauritania and Senegal, which are usual departure points of unauthorized migration and cross-border crime, but are also known for gaps in their legal systems, mainly regarding the respect to the fundamental rights. However, Frontex has to respect human rights also when cooperating with TCs. As is the situation, in some of these North African states is the situation getting worse than better, it is questionable when Frontex will be able to cooperate with these countries on the basis of a clear and transparent arrangement.

### **2.3 Technical Challenges of Border Surveillance**

Because of the increasing number and the scope of the activities carried out by Frontex and by the MSs in the Mediterranean, the MSs and Frontex face several challenges at the southern sea border, e.g.

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<sup>8</sup> Frontex already signed working arrangements with 18 countries: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Canada, Cape Verde, Croatia, Georgia, Macedonia, Moldova, Montenegro, Nigeria, Russia, Serbia, Turkey, and Ukraine. Further working arrangements are being negotiated with Libya, Morocco, Senegal, Egypt, Brazil, and Tunisia.

how to detect and track small boats, the high personnel costs, efficiency and surveillance capability of border patrols (FRONTEX, 2014b). According to the Italian former Prime Minister, Enrico Letta, it is intolerable for Italy that “*the Mediterranean is a sea of the dead*” (Day, 2013). Although and because the Mediterranean is one of the busiest seaways in the world, the core of these challenges constitutes the problem how to monitor this extensive area of 2.5 Mil square km and collect information on what is happening also in remote places. The current technology faces several problems, e.g. weather conditions and clouds affect satellite images, the pictures taken by satellites are not real-time and can be taken only when the satellite is directly overhead, the automated identification system for boats is mandatory only for commercial vessels and fishing boats over 16 metres, infra-red cameras can scan shore only to the distance of ca. 1.2 km (FRONTEX, 2013c). As the technology develops, MSs as well as Frontex are interested in more effective and efficient technological equipment to counter these challenges. On its website, the Agency made clear that aerial surveillance is a key element of the joint operation (JO) Hermes (FRONTEX, 2013c). A widely recognised solution to those challenges is the acquisition and deployment of drones according to the US, Australian or Canadian example. According to the Special Report for NATO on UAV and their, mainly technological, potential, the operational advantages of drones are that in the long term they are cheaper than manned solutions. They are more expandable and can stay airborne much longer than a human crew (Nolin, 2012). Nevertheless, there are also some technical drawbacks, e.g. the lack of flexibility due to a construction for specific requirements or concerns about the ability to react to unexpected situations and loss of communication with the operator (Nolin, 2012). Also, there has been some debate about if drone-technology is actually cheaper than manned solutions in the long term.<sup>9</sup> For Frontex, it is necessary that the drones-technology proves that it is able to persistently monitor large areas, function in all weather conditions, identify suspect vessels and human presence, provide real- and near-real time operational data and can be integrated into existing surveillance networks, but mainly that they are a cost-efficient alternative to manned aircraft and that they can be integrated into the normal airspace (Kolev, 2012; Beugels, 2011). What is mostly debated in the perspective of drones’ deployment by Frontex are not the technical details but the impact of this technology on the border management, the fundamental rights of migrants and privacy rights of all people near the border.

The information on the situation in the Mediterranean collected by Frontex and the Schengen countries will be shared through European Border Surveillance System (EUROSUR). EUROSUR is a technological network whose aim is to sustain a better border management of the EU’ external borders developed by Frontex with the MSs’ border authorities. It became operational in December 2013 through the Regulation 1052/2013 (EUROSUR Regulation) establishing this network.<sup>10</sup> The components of EUROSUR build national coordination centres (NCC), national situational pictures, a communication network, a European situational picture, a common pre-frontier intelligence picture, and a common application of surveillance (art. 4(1) EUROSUR Regulation). The situational pictures consist of three layers of information: events, operational information, and analysis (art. 8(2) EUROSUR Regulation). For this purpose, Schengen states had to establish National Coordination Centres (NCC) to be able to coordinate action with other national border management authorities and to gather and exchange near-real time information not only with other participating states but also with its own bodies of national border guards and of law enforcement (European Commission, 2013b). The information about situation and border related activities of one participating state is called “situational picture” of that state. Frontex, then collates the situational pictures of all Schengen states and adds own information and information from other sources will create a picture for the Schengen states altogether, i.e. the “European Situational Picture” that is then shared with the MSs (art. 10 EUROSUR Regulation). Moreover, Frontex also manages the common pre-frontier intelligence picture (CPIP) on what is happening on and external to the EU borders and also includes information on prevention of

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<sup>9</sup> For example the SBInet, the US integrated surveillance system for border management including also the wide-spread use of drones, was terminated in 2011 due to high costs and frequent problems (Kenk, Križaj, Štruc, & Dobrišek, 2013).

<sup>10</sup> According to art. 24 of the EUROSUR Regulation, by 2<sup>nd</sup> December 2013 EUROSUR became operational in: Bulgaria, Estonia, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Romania, Slovenia, Slovakia and Finland. The remaining MS shall be included in the network by 1<sup>st</sup> December 2014.



unauthorised migration and cross-border crime. The information is planned to be gathered with the help of various technological systems, e.g. satellites, ship board monitoring systems, drones, ground sensors etc. This network will be used to enhance the cooperation between national border control agencies, as well as between them and Frontex and to promote the surveillance of EU external borders and therefore improve the border protection and save lives of migrants (Hayes & Vermeulen, 2012; EUROSUR Regulation, 2013). EUROSUR will also contribute to the development of a Common Information Sharing Environment (CISE) for the maritime surveillance where an information exchange will be carried among public authorities across sectors in the EU (EUROSUR Regulation, 2013).

#### 2.4 Overview of Frontex' Activities on Drones-Technologies

Formally, drones were firstly introduced to the EU policy discourse firstly in July 2002 (Hayes, Jones, & Töpfer, 2014). Since then, the discourse broadened to multiple dimensions of civil purposes. The current activities on drones for border surveillance in the EU can be divided into three categories: activities of Frontex itself, activities of other EU institutions, activities of the MSs. These three categories are also interconnected as many MSs' authorities are involved in the activities of EU institutions and/or participate in those carried out by Frontex. On the other hand, Frontex monitors the research across the fields and states and informs the MSs and the EU about the current developments. Firstly, I will engage with the category concerning Frontex. Deriving from the art. 2(1d) of the amended Frontex Regulation, the Agency was given competences in research and development as one of the main tasks of the Agency is *"to participate in the development of research relevant for the control and surveillance of external borders"* (Amended Frontex Regulation, 2011). In 2013, the budget for R&D constituted 1.2 Mio EUR that counts for 1.4 % of the total budget for 2013 (FRONTEX, 2012b). Frontex with the help of the European Commission (EC) supports research concerning border surveillance that aims to *"improving detection of irregular migration and cross-border crime as it occurs between border crossing points (BCPs)"* (FRONTEX, 2014a). This research should also help the MSs to identify and address any vulnerability at their borders as well as *"investigate the possibilities of automated data mining and media analysis as a part of the creation of an EU-wide intelligence picture"* (FRONTEX, 2014a).<sup>11</sup>

On its website, the Agency confirms its interest in drones mainly for improving its SAR capability (FRONTEX, 2014a). This includes initiatives in further research and development as well as organisation of practical demonstrations and tests of drones-technology (FRONTEX, 2014a). The technologies developed and tested by Frontex will also help to develop and improve the EUROSUR capacity and therefore also contribute to the situational awareness on what is happening at the borders and increase the reaction capability of the MSs (Laitinen, 2013). The interest of Frontex in the use of drones for European border surveillance is unsettling although they have the potential to counter the challenges of border management, e.g. how to detect small boats that migrants use to get over the Mediterranean, detect persons and vehicles under foliage, secure cost-efficiency of border surveillance etc. The Executive Director of Frontex, Ilkka Laitinen, in an interview for EUobserver admitted that drones *"seems to be a reliable and cost-effective means for surveillance"* (Nielsen, 2013a). He also repeated this in his contribution to the last year's March issue of Government Gazette: *"New tools and innovative solutions are required to tackle these challenges. [...] RPAS offer great potential for border surveillance"* (Laitinen, 2013). The Head of R&D at Frontex, Edgar Beugels, admitted that Frontex is interested in drone-technology for border surveillance, however, he added that: *"remotely piloted aircraft is just one of the technologies we are looking into. At this moment we do not know if this technology is a technology that we could potentially give to the border guard community"* (Nielsen, 2013b). This uncertainty about the real deployment of drones can have multiple reasons. Firstly, the current European aviation law does not allow drones to fly in non-segregated airspace<sup>12</sup>.

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<sup>11</sup> In computer sciences is data mining a practice of examining large pre-existing databases in order to generate new information (Oxford University Press, 2014b). Media analysis constitutes the monitoring of open and media sources and analysing its effects on its audience, trends, as well as reliability when reporting news (Dictionary Central, 2012).

<sup>12</sup> Non-segregated airspace is airspace open to all civil air transport. The current aviation law prohibits the deployment of fully automated drones in non segregated airspace (Hayes, Jones, & Töpfer, 2014).

Secondly, there still remain doubts about the compliance of past Frontex' activities with international and European refugee law. These doubts also imply the hugely criticised lack of transparency and external evaluation of the Agency because many of its work/ plans/ studies are not made public due to the sensitivity of the contained data (Perkowski, 2012; Léonard, 2010). Nevertheless, still some information can be found because the Agency is committed to the Regulation No. 1049/2001 regarding the public access to documents (FRONTEX, 2006).<sup>13</sup> However, from the statements of Frontex' officials and also from the information provided on its website it can be concluded that Frontex in the relation to its interest on drones is more concerned about the cost-effectiveness, efficiency and added value and technological limitations of drones for the use in border surveillance than about what threat do drones pose to fundamental rights and civil liberties (Laitinen, 2013; Nielsen, 2013b; FRONTEX, 2014b; FRONTEX, 2012a). This is supported by the "Eurodrone Inc." report by Statewatch which states that the EU drone policy is fashioned in technocratic process (Hayes, Jones, & Töpfer, 2014). Following this, I provide a short overview of the most important Frontex' activities on drones since 2007 (see Fig. 4).

Projects of Frontex on drones build a kind of framework for the specific activities of the Agency on drones. Information about projects on remote sensing and detection technology can be found since 2010. The latest project, "All Eyes 2013", received funding of 450.000 EUR from the Agency's budget (FRONTEX, 2012). This project looked at the feasibility, functionality and capability of border surveillance and detection technologies, e.g. RPA, radars, ground detection sensors, as well as it exploited the integration of data collected into the existing border control systems (FRONTEX, 2014e).

The Agency also hosted several workshops on drone-technology. In 2009 and 2010 it conducted workshops "RPA and Land Border Surveillance" in Imatra, Finland.<sup>14</sup> Further workshops were hosted in Sofia, Bulgaria, and Warsaw, Poland, in 2012 and 2014. These workshops are aimed at closing the communication gap between the producers and end users and bring together the border management authorities, research institutes, universities and industry to exchange views, experiences and needs (FRONTEX, 2014b; FRONTEX, 2012a).

Demonstrations of the drones-technology in various conditions are another type of events Frontex regularly organises. To these sessions, European and international drone-technology manufacturers were invited to present last developments in their industry and demonstrate their capabilities for border surveillance.<sup>15</sup> According to some sources, Frontex subsidises these companies to participate on the demonstration where the participating representatives of the MSs act as potential customers (Fotiadis & Ciobanu, 2013; Hayes, Jones, & Töpfer, 2014). For example, in 2011 Frontex paid 30.000 EUR to Lockheed Martin UK Integrated Systems & Solutions for participating in demonstration of OPV UAVs in Aktio (GR) (FRONTEX, 2012c). The subsidies to the participating companies for this demonstration session varied between 10.000 and 198.000 EUR (Fotiadis & Ciobanu, 2013).

Frontex was also engaged in many research and development projects under the Seventh Framework for Research and Development (FP7)<sup>16</sup>. Its role in those projects is nevertheless more of an input-giver, i.e. based on its experiences as possible end user it provides requirements for projects and collaborates during the projects. The FP7 operated a budget of 55 806.1 Mio EUR (2007-2013), where to the thematic area of security research was granted 1 300 Mio EUR (European Commission, 2013a). The information about all projects funded under FP7 can be found on the website of the European Commission's Community Research and Development Information Centre. In the period 2007-2014

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<sup>13</sup> In the decision it is specified that the Agency shall be subject to the Regulation No 1049/2001 with accordance to the art. 28 of the Frontex Regulation. Nevertheless, this obligation can be opted out when some public or private interests have to be protected (FRONTEX, 2006).

<sup>14</sup> This workshop included live demonstrations of mini RPA (Patria MASS, Rafael Orbiter, SIM Skyeeye, Selex ASIO) and Aerostats (Skystar 180) (Kolev, 2012).

<sup>15</sup> Among the companies that attended the workshops in the past belong for example Thales (UK), Aerovisión (SP), Scotty Group (AU), Israel Aerospace Industries (Israel), L-3 Communications (USA), AeroVironment (USA), Selex (IT), Safran Group-Sagem, Inmarsat (UK), Diamond Aircraft (AU), Altus (USA), Lockheed Martin (UK).

<sup>16</sup> The FP7 was in function 2007-2013. The follower of this funding programme is Horizon 2020 (2014-2020). Both Programmes aim at improving the innovation and hereby increasing the international competitiveness of Europe.

there were quite a lot of projects, mainly in the recent years, which dealt with the topic of drones and surveillance in any perspective (see Fig. 5).

## 2.5 Possible Design Scenarios of the Deployment of Drones by Frontex

The specific design of the deployment of drones can be partially identified on the basis of the research done on Frontex' activities and projects under FP7 on drones. As the research in previous chapter showed, Frontex worked on drones not only as part of (theoretical) studies, but multiple times also tested the technology in real situations. Viewing the high number of demonstrations, it can be assumed that Frontex already gained a lot of technical and practical knowledge about drones' performance in various situations and will further build this up. It also shows that the for real deployment of drones for border surveillance is not science-fiction but reality of the near future.

Nevertheless, neither the results of the projects by Frontex (All Eyes 2012/2013, Remote Sensing and Detection Technology) nor the results of the demonstrations were made public. During the years, the Agency also developed tight relationship with the representatives of the drones' manufacturing industry. This was also expressed by Ilkka Laitinen: *"Our experiences with the co-operation with industry are very positive – they have a lot of good ideas and they brought many new innovations"* (Nielsen, 2013a). For example, the Spanish company *Ingeniería de Sistemas para la Defensa de España* (Isdefe) recently won a contract for conducting a study *"on advanced technological integration for solutions for under-foliage detection and their potential impact on border surveillance"* (Tenders Electronic Daily, 2014). The same company also was in charge of implementing the Study on RPA for Border Surveillance – performance & efficiency in 2012 (Kolev, 2012). In May 2013 a contract with the Austrian Scotty Group was signed. This company was supposed to provide an OPAS to be used in July 2013 for two weeks for the surveillance of the Greek-Turkish border. Unfortunately, the Scotty Group failed to get a licence from the Greek authorities, so the trial never took place (Nielsen, 2013c).

Frontex has held several demonstrations mainly at the air bases in Alexandroupolis (GR), Aktio (GR) or Almeria (SP). Drones were tested in Greece also as part of the JO Poseidon (Statewatch News Online, 2013). The drones are also very suitable for Greek coastline that is characterised by really high number of small, often inhabited islands. But as the statement by Ilkka Laitinen suggests, the pre-frontier area *"is where Frontex is due to arrange the delivery of additional surveillance data from an area that is beyond the border, typically we are talking about international borders or some further areas"*. The information collected in this area will build the common pre-frontier intelligence picture (CPIP) within the EUROSUR network.

According to the project Open Architecture for UAV-based Surveillance System (OPARUS)<sup>17</sup>, in 2012 only two scenarios of drones' deployment were possible: deployment in segregated airspace from which all other traffic is excluded or short range use, i.e. visual line-of-sight deployment (VLOS). But the OPARUS study suggests that since 2014 it will be possible to deploy drones over maritime areas such as over some areas of the Canary Islands or South Mediterranean because of the lower airfield density of normal traffic and no obstacles like trees compared to a land scenario. There it is easier to pre-plan the flight path and keep it clear of other traffic, in negotiation with locally responsible air traffic control (OPARUS, 2012). On the other hand, according to the results of a more recent project, the Collaborative evaluation of border surveillance technologies in maritime environment by pre-operational validation of innovative solutions (CLOSEYE)<sup>18</sup> more than 75 % of companies offering UAS assume that their systems can be deployed for maritime border surveillance

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<sup>17</sup> OPARUS project aim was to *"propose and elaborate of open architecture for the operation of unmanned air-to-ground wide area land and sea border surveillance platforms in the EU to offer a major increase in the capabilities of border surveillance agencies by improving the effectiveness and minimizing the cost of surveillance"* (OPARUS, 2012). The project members were Sagem Défense Sécurité, BAE systems, Dassault Aviation, DLR, CASSIDIAN, IAI, INTA, ISDEFE, ITWL, ONERA, Selex Galileo, THALES Communication and security SA, Thales Systemes Aéroportés, Tony Henley Consulting Ltd.

<sup>18</sup> CLOSEYE is a project aiming at *"providing the EU with an operational and technical framework that would increase situational awareness and improve the reaction capability of authorities surveying the external borders of the EU"* (European Commission, 2014a). The project consortium builds up of following members: Guardia Civil, Guardia Nacional Republicana, Marina Militare, Agenzia Spaziale Italiana, Centro Italiano Ricerche Aerospaziali, Isdefe, European Union Satellite Centre (EUSC), Frontex as External Entity.

in 2 – 3 years timeframe regarding the current EU' and MSs' legal framework (ASI, 2013). Before, the project OPARUS concluded that EU has very restricting legislation concerning the flying of drones (OPARUS, 2012). This is also supported by the project CLOSEYE (ASI, 2013). Furthermore, the OPARUS identified many initiatives and poor common standards for UAVs that can be obstacles in developing harmonisation of border surveillance technologies.

Most probably, the information collected by drones will be stored in one of the locally responsible NCC within the EUROSUR framework. The EUROSUR Regulation also counts with this possibility in art. 9(2b), i.e. the national situational pictures will be composed by information collected by mobile sensors operated by national authorities responsible for border surveillance, as well by drones. Moreover, according to art. 12 EUROSUR Regulation on common application of surveillance tools, the Agency can use the information collected by drones *“in order to supply the [NCC] and itself with surveillance information on the external borders”*. The NCCs, established by the national authorities responsible for border surveillance, coordinate their activities with other MSs and Frontex. Nevertheless, the European Commission stresses that the exchange of personal data is very limited as the main information exchanged is about operations, e.g. location of incidents, patrols, intelligence reports, and the legal framework of data protection is being fully applied (European Commission, 2013b). Still this information can be relevant for persons just as information from operations carried out with the cooperation of TCs on the basis of bilateral agreements between MSs and TCs can be included into EUROSUR as well (art. 20(1) EUROSUR Regulation<sup>19</sup>). Knowing that certain operation is being carried out in a certain area will deter people to use a route going through that area. On the other hand, the use of several advanced technologies, e.g. sensors and cameras, on drones could lead to an increased need for more detailed information, including exchange of additional information, e.g. tasking, images, assets positioning, tracks, to even more effectively track migrant and smugglers routes in the Mediterranean. Such possibility will require an enhanced protection against private data misuse. This can be countered by a reform of the Data Protection Directive 95/46/EC and by the adopting of the proposed General Data Protection Regulation that are both now in a progress and should address the civil liberties concerns possibly infringed by surveillance (European Commission, 2014b; European Commission, 2014c).

According to the research on Frontex' activities on drones, several possible designs of the ownership of drones used by the Agency can be identified. The first scenario, and for the Agency the cheapest one, is to use drones that are already possessed by the MSs because Frontex may lease technical equipment of the MSs for the purposes of external border control (Amended Frontex Regulation, 2011). Although, the MS has to agree on the use of its own equipment by the Agency, there is a sufficient legal framework for the use of MSs' technical assets by Frontex (art. 7 amended Frontex Regulation). The Agency also keeps a Technical Equipment Pool (TEP), a database that includes list of equipment owned either by a MS or by Frontex and co-owned by the MS and the Agency, as well as information about deployability, availability, and technical parameters of these assets (FRONTEX, 2014e). Among the southern MSs, Spain, and Italy and within a short time also Greece disposes drones that can be used for border surveillance. Italy has unmanned aircraft base in Sicily and has already deployed a couple of drones under the Operation Mare Nostrum for identifying migrant vessels in 2013 (Day, 2013; Ghelli, 2013).<sup>20</sup> This summer, the new Italian Prime Minister Matteo Renzi will present a plan where Frontex should take on the obligations of this operation (Scherer, 2014). Spain has also considered using drones for the sea border surveillance, mainly in the Strait of Gibraltar and over the Canary Islands (Purvis, 2011). It also completed several tests within PERSEUS project last year (Plunkett, 2013). The Spanish authorities support or engage themselves in several projects on drones financed under the FP7 (e.g. PERSEUS, CLOSEYE, TRITON, AEROCEPTOR). However, under a new Spanish regulation the deployment of drones for civil purposes (including

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<sup>19</sup> Article 20(1) of the EUROSUR Regulation states: *“For the purpose of this Regulation, Member States may exchange information and cooperate with one or several neighbouring third countries. Such exchange of information and such cooperation shall take place on the basis of bilateral or multilateral agreements or through regional networks established on the basis of those agreements. The national coordination centres of the Member States shall be the contact points for the exchange of information with neighbouring third countries.”*

<sup>20</sup> Italy possesses six MQ-9 Reapers and Predator, but only Predator is meant for border surveillance (Wolf, 2012; Ghelli, 2013). The Operation Mare Nostrum is an Italian *“humanitarian operation to save human lives”* in the Mediterranean, although it also has a substantial military character (ANSAméd, 2013; Ghelli, 2013).

commercial or professional drones) is not allowed in Spain. Therefore military drones can be used only under special conditions (Howell, 2014). Greece has newly issued a competition call for a drone suitable for day and night border surveillance of the Aegean Sea with a budget of EUR 77,800 (New Europe Online, 2014; Mamakouka, 2014). Because the southern states of the EU consistently call for assistance of the EU in migration issues, it can be assumed that both states would agree with the idea of Frontex including their drones for the joint surveillance of the southern maritime border, as their shores are not only a national border but an entry point of the whole EU. This possibility is very cost-efficient as MSs provide the Agency with the equipment as well as the necessary experts and technical crew to operate the equipment (Amended Frontex Regulation, 2011). Another possibility is that these states just include the information collected by their drones in their own operations into the EUROSUR network. This is very national-security-friendly because according to the EUROSUR Regulation (art. 9(5a) ), states can still restrict the access to the information concerning their deployed assets.

The second scenario, own acquisition of drones by Frontex, is legally possible. The amended Frontex Regulation (art. 7(1) ) newly allows the Agency a procurement of own technical/technological equipment, but such an expenditure has to be evaluated on the basis of a need and cost/benefit analysis and the necessary financial means for the acquisition have to be found within the Agency's budget (Amended Frontex Regulation, 2011). According to the General Report 2013 of the Agency, Frontex works on developing TEP with own assets. In 2013, Frontex Management Board implemented new form of equipment acquisition, where the next step was a pilot project of Frontex representing a *"tender procedure for the acquisition of aerial surveillance services along the external EU land borders"* (FRONTEX, 2014e). This project had the aim to assess the operational effectiveness and cost-efficiency of the equipment and services. Moreover, according to the Agency's Programme of Work for the Year 2014, there is a RPAS trial in March of 2014 planned with expected expenses of 250.000 EUR (FRONTEX, 2014f). On the other hand, the same document declares that Frontex will *"take measures to establish its own (contracted from member state or other suppliers) technical means on a limited scale"* (FRONTEX, 2014f). This therefore does not support the idea of Frontex acquiring own drones already this year. Nevertheless, it does not exclude this fully in the future.

The co-ownership of Frontex and a MS could be a possibility for the southern MSs mainly because of the co-financing from the Frontex' and therefore EU' budget. As known, the southern MSs are now forced to take many austerity measures because of their high debt levels and severe economic problems.

In my opinion, Frontex is likely to shift its own activities on drones under the project of EUROSUR, which Frontex developed and is administrating now. This is supported by the statement by Ilkka Laitinen when speaking to the Civil Liberties, Justice and Home Affairs Committee (LIBE) in March 2013 he said: *"EUROSUR is the new wrapping of Frontex activities"* (Martin, 2013, p. 5). I agree with this opinion, in the fact that after four years of steady projects on drone-technology, in 2014 there cannot be found any particular project in this field conducted by the Agency. Another argument is that EUROSUR pursues the same objectives as Frontex wanted to address with drones, i.e. protection of migrants and lives at sea, prevent unauthorised migration as well as combat cross-border crime through better border surveillance and help to increase the internal security of the EU and save lives at sea. This argument is also supported by the official documents (presentations of Frontex officials) that emphasize that drones can play a sufficient role in EUROSUR (Kolev, 2012; Beugels, 2011; Laitinen, 2013). Though the Agency's highly manifested interest in drones, at the same time lacks any specification on the role of drones within Frontex. However, no matter under which "flag" (Frontex, EUROSUR, MS) will drones be deployed, they will definitely alter the current border surveillance and management.

### **3. Deployment of Drones for Border Surveillance of the EU' Southern Sea Border**

As envisaged by the previous chapters, the deployment of drones in the Mediterranean waters is highly possible because Frontex is not the only one engaging and testing such technology. Although, Frontex and other national authorities claim that drones will be used mainly for helping people in distress at

sea (i.e. SAR) and preventing cross-border crime, the impact of their use can be much broader. Drones are only a type of sense-and-detect technology, therefore it is not important how many drones a state/Agency will use but more what will or can be done with the information collected by a drone. Firstly, this chapter will mirror the current regulation on drones used for border surveillance in Europe. Following from that, an analysis of the legal impacts of drones on the surveillance of the Mediterranean will be provided. Last part of this chapter analyses how civil liberties and fundamental rights are threatened and to what extent does the drones' deployment challenge these rights.

### **3.1 Current Regulation on Drones-Technology for Border Surveillance in Europe**

Regarding the current legislation concerning drones' deployment in Europe, they mainly address technical / technological standards of aerial subjects, authorisation of manufacturer and operator, and liability in case of an accident. To cover all relevant legal provisions concerning these issues is therefore out of interest and scope of this thesis. Nevertheless, a short summary is provided in this sub-chapter whose aim is to indicate the importance of a broader and detailed legislation as well as the workload that persists in this field in the EU before actual drones are deployed for real.

In the EU, there is an unclear legal framework regarding the flight of drones in non-segregated airspace as well as the fundamental rights and privacy concerns raised by the application of drones. All this accompanied by the complexity and multimodality of these surveillance systems that integrate a high range of other technologies and capabilities, hinders the current deployment of drones in Europe. Nevertheless, the EU has competence to regulate only drones above 150 kg. Under this limit, drones are subject to national regulation of the national aviation authority. For an application of drones for the surveillance of large areas as the Mediterranean, the Union will have to secure a mutual recognition of standards across the MSs. However, the European Commission (EC) consults its plans on introduction of drones into European airspace with different stakeholders (e.g. industry, national authorities) since 2009 (European Commission, 2014d).

The International Civil Aviation Organization (ICAO)<sup>21</sup> is also working on providing an international regulatory framework for the deployment of drones. ICAO states clearly that the civil market with drones will remain limited until an appropriate regulatory framework is in force. According to the Chicago Convention on International Civil Aviation every civil aircraft flying above another state's territory must comply with the instructions provided by that state (ICAO, 2011). However, concerning the operations in high seas, i.e. international waters, there is a very broad regulation stating that the operator of a RPA must have an approval from a states' authority before the actual start of the operation and must coordinate the operation with air traffic service provider that is responsible for the airspace of operation (ICAO, 2011). If it should stay so, Frontex could get problems to operate drones for large-scale surveillance in JO in the area of many states as the drones' operator will have to ask for permission every time the drone gets into another state's territory. However, drones can be currently deployed across Europe and in international airspace drones only as far as the operator maintains a visual contact with the drone, i.e. visual line-of-sight (VLOS)<sup>22</sup>. For deployment beyond the VLOS, the drones have to be operated in segregated airspace or must be equipped with sense-and-avoid system that is safe for use. Unfortunately, sense-and-avoid systems need further developments as there is currently worldwide no system to be considered as safe for use (UK Civil Aviation Authority: Directorate of Airspace Policy, 2014). Moreover, the EU law prohibits the flight of fully automated unmanned drones in commercial airspace (Hayes, Jones, & Töpfer, 2014).

Many scholars are worried about the lack of proper legislation and lack of harmonization. According to them, the efficiency and effectiveness of some technology should not sacrifice the legality, i.e. a sufficient regulatory framework should always come before the actual application (Trevisanut, 2009; Kenk, Križaj, Štruc, & Dobrišek, 2013). A proper legal framework concerning the use of drones should define rules for: the purpose of drones' use, by whom the drone will be used and under what circumstances, what information will drones collect, image retention period, safeguarding the data

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<sup>21</sup> ICAO is an UN Agency created in 1944. This Agency works with global industry and aviation organizations on development of international Standards and Recommended Practices (SARPs) which then are used by national states for the development of their legally-binding national civil aviation legislation (ICAO, 2014).

<sup>22</sup> VLOS differs across states. Usually, it means an area of about 500 m horizontally and about 120 m vertically (UK Civil Aviation Authority: Directorate of Airspace Policy, 2014).

privacy, protection of other rights (Kenk, Križaj, Štruc, & Dobrišek, 2013). The EU plans to revise the regulation concerning airspace technology and its deployment by 2016 in order to integrate drones into national airspace from that year (Nolin, 2012; European Commission, 2014c). The EC specified that the future regulatory framework concerning drones “*should reflect the wide variety of aircraft and operations, keep rules proportionate to the potential risk and contain the administrative burden for industry and for the supervisory authorities*” (European Commission, 2014c, p. 5). This is a necessary step towards new jobs’ creation and growth in Europe as drones are to become “*a key to the future competitiveness of the European aeronautic industry*” (European Commission, 2014c, p. 3). It can be therefore concluded that the European or international airspace is legally not yet prepared for real introduction of drones for civil application in a large scale.

### **3.2 Legal Impacts of Drones on EU’s Border Management of the Mediterranean Border**

The possibility of drones’ deployment by Frontex in the Mediterranean for border surveillance is still real, if not now then in the near future. Their deployment definitely alters the border management as we know it because drones help in covering much broader space with much less resources. Italy has already been using drones in its operations on its maritime borders already. It also hopes for an introduction of similarly designed far reaching, all including maritime border control and surveillance initiatives as those in Italy in other European states (Greenan, 2013). The migration rights advocates however argue that the drones’ deployment only strengthens the “fortress Europe” mentality. Another difference is that drones can carry necessary technologies for surveillance, e.g. video cameras, thermal imaging devices, radiation detectors, mobile phone jammers, air sampling devices, infrared vision cameras, that collect information that can be further stored and used for e.g. analyses. And namely, the carried technology involving also personal data is what is the most worrying about drones’ deployment.

As the art. 6 SBC states, the border control should be fully in line with respect to human dignity, not discriminatory, and be proportionate to the objectives pursued, and border surveillance, understood as part of border control (recital 8, SBC), must therefore also respect this. As according to art. 12(4) SBC surveillance may be “*carried out by stationary by technical means, including the electronic means*”, drones can be considered as legitimate tool for border surveillance. Right away it can be stated that drones’ deployment pursues legitimate objectives, e.g. SAR, stop cross-border crime, to prevent unauthorised migration, to save human lives and protect the national security and order. To prove is if drones constitute the least restrictive measure that could be chosen to achieve these objectives and they must not evidently imbalance the costs and benefits.<sup>23</sup> Moreover, the surveillance and the objectives pursued must be framed according to the risk analyses. Frontex will therefore stay one of the important players as one of its main tasks is conducting risk analyses. On the other hand, drones will also contribute to the building of risk analyses.

The use of surveillance technology, e.g. drones, at legal border crossing points<sup>24</sup> is proportionate because people expect to be monitored there as it is a highly public place (Kenk, Križaj, Štruc, & Dobrišek, 2013). Surveillance between the border crossing points can be also considered legitimate as it is perceived as a need to prevent and discourage persons from circumventing border checks (art. 12(2) SBC). Nevertheless, even when the border control is carried out external to the EU borders, the SBC still applies when it is carried out by a MS or Frontex as well as the obligations to protect fundamental rights do (Dünnwald, 2011). The derogation of art. 7 SBC on border checks on persons that should be carried out according to the definition in art. 2 SBC at border crossing points at the EU’ external borders is provided in the Annex VI of the SBC. It specifies that at sea borders, checks can be carried out even during crossings or, upon the ship’s arrival or departure, in the territory of TC (3.1.1. Annex VI SBC). The execution of these border checks should according to the art. 6 SBC fully respect the human dignity and the principles of proportionality and non-discrimination. Also, according to the Hirsi judgement are obligated to respect this even when they act outside of the EU territory (Case of Hirsi Jamaa and Others v. Italy, 2012). However, the control measures at external borders should not “*constitute a major barrier to trade and social and cultural interchange*” (recital 11, SBC). On the

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<sup>23</sup> This is an applied principle of proportionality (Sauter, 2013).

<sup>24</sup> Border crossing point is any crossing point authorised by the competent authorities for the crossing of external borders (Schengen Borders Code, 2006).

other side, drones will definitely help to locate migrants' and other boats in distress at sea because they are able to cover much larger area than a deployed manned vessel or aircraft. Nevertheless, as drones are just sense-and-detect technology, they will not solve the problem, who is responsible for rescuing a boat with migrants in distress<sup>25</sup> and who should bring the people to the nearest place of safety. According to the annulled Decision 2010/252/EU<sup>26</sup>, MSs can intercept vessels under specific conditions and even disembark the people in TC from where the ship departed (Part II, paragraph 2). This causes concerns among scholars because this decision still applies, even though lacking the guarantees to respect the principle of non-refoulement. According to international law of seas there is an obligation to render assistance to a boat in distress and it applies to all vessels, both commercial as governmental (International Maritime Organization, 1985), but nowhere is clearly specified where is the nearest place of safety. According to FRA report, in the Mediterranean this causes a lot of problems (for example in the case of the Salamis tanker) because of lack of responsibility sharing. Mainly shipmasters of civil and commercial ships are concerned about their obligation to rescue migrants at sea because they have to report it to the national authorities and then await their arrival which can take a long time. Sometimes they have to start a rescue operation on their own, but then their ship and crew are threatened (desperate migrants often try to get to the ship any way possible and enforce their rescue) or face problems where to disembark the migrants as states are reluctant to allow the disembarkation of unauthorised migrants in their ports. Similar problems with place of disembarkation face the military vessels that often cruise the Mediterranean.<sup>27</sup> For commercial boats, taking part in rescue operation is very costly and dangerous as migrants might try to get to the boat on any way. Therefore, many of them try to avoid migrants' vessels and do not report them to the authorities. Also according to the report, Malta applies very strict definition of what is a vessel in distress and usually just helps migrants with repairing their boat or gives them food and water so they can continue in their journey to other states (FRA, 2013). Moreover, no maritime rescue services are part of EUROSUR (Hayes & Vermeulen, 2012). The former Italian Prime Minister Enrico Letta also stressed that identification of migrants' vessel in distress by an Italian vessel (or even drone) does not automatically mean that these migrants will be taken to an Italian port; this will be decided upon where the operation takes place (Day, 2013).

But, the term border surveillance as defined in the SBC does not include the situation of surveillance behind the external border as it is envisaged by the development of CPIP and builds a gap between the law and ambitions. This can also include the surveillance of territorial waters of TCs touching the territorial sovereignty of that state. This extra-territorialisation promises two effects, i.e. to deter new departures of migrants from North Africa or to identify boats in time, intercept and return the boats that already departed before they reach the European territory because their plan was obviously to circumvent the border checks (Carling & Hernández-Carretero, 2011). To make it possible, far reaching bilateral agreements have to be signed with the TCs. This raises concerns as a lot of North African TCs do not sufficiently protect fundamental rights and as long as the people, mainly refugees, find themselves on their territory, neither MS nor Frontex is able to prevent the violation of their rights. The surveillance of the TCs' territory can even promote location and identification of people that are of interest for local law enforcement authorities.

Another topic that we still need to keep in mind is that the responsibility for the control and surveillance of external borders that lies with the MSs (art. 1(2) Amended Frontex Regulation). Frontex is responsible for the coordination of MSs' actions on the EU' external borders. The Frontex Regulation does not count with the possibility of Frontex facilitating border surveillance by drones.

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<sup>25</sup> Distress as defined by the SAR Convention is a "situation wherein there is a reasonable certainty that a person, a vessel or other craft is threatened by grave and imminent danger and requires immediate assistance" (International Maritime Organization, 1985).

<sup>26</sup> In 2012 the ECJ annulled the Council Decision 2010/252/EU that supplemented the SCB regarding the surveillance of the sea external borders. According to the ECJ this decision has to be replaced by a legal act decided by an ordinary legislative procedure, i.e. with approval of EP, because it constitutes a major development of SBC. The decision maintains its effects until new rules come into force (ECJ, 2012).

<sup>27</sup> In 2011 a Spanish naval force rescued about a hundred of migrants and it took five days of negotiations till those people could be disembarked in Tunisia. The FRA report found out that migrants often report to encounter a military vessel during their journey but they are mostly turn away without reporting the migrants' vessel or rendering assistance (European Union Agency for Fundamental Rights, 2013).



This could become a problem if drones will be solely deployed by Frontex because the liability for any action of the drone is missing, e.g. in case of an accident, rights violation. This is mainly true in cases of fully automated drones that are programmed to fly independently and therefore it is hard to allocate responsibility for their action as well (Nolin, 2012).

The question here is whether the deployment of drones will actually lead to better security for migrants trying to reach Europe by sea as there is not a proper responsibility sharing mechanism concerning rescue operation. In my opinion, drones will definitely help to locate migrants' and other boats in distress at sea but will not decide, regarding the situation, whether these should be rescued or not. Therefore, I am of the opinion that drones will more serve other, security related objectives, i.e. detect and prevent cross-border crime and unauthorised migrants from reaching the European territory.

### **3.3 Civil Liberties and Fundamental Rights Concerns in the Context of Drones and Migration to Europe**

Drones are mainly known in the context of military combat zone but they can also be applied for civil purposes. Yet, in the civil area much stricter rules regarding the respect for fundamental rights and civil liberties enacted by domestic and international law are valid because of the absence of war conflict. In this chapter, I will analyse which exact civil liberties and fundamental rights are being challenged by the drones' deployment for border surveillance and to what extent, applying the legal principles of proportionality, rule of law, respect for human rights and necessity.

Among the main civil liberties challenged by drones deployed in the Mediterranean are the privacy rights of all people found within the sight of the drone at sea, e.g. fishermen, tourists, migrants. Drones as sense-and-detect technology increase the conflict between security and privacy (Marin, on file with author). Because of the fact that nobody can be excluded from the surveillance, some standards have to be met to make sure that innocent people will not be harmed in their rights and freedoms. Privacy has multiple dimensions: privacy of persons, privacy of personal data, privacy of personal behaviour, privacy of personal communication (Finn & Wright, 2012). Regarding the privacy of personal data<sup>28</sup> several EU' legislations apply. According to art. 7 of the EU Charter everyone has the right to have their private and family life, home and communications respected (Charter of Fundamental Rights of the European Union, 2000). According to art. 8 of the European Convention, individuals have the right to the protection of their personal data including processing, consent, access to data, and right to rectification (European Convention on Human Rights, 2010). To monitor individuals in the public place without recording it was allowed by the European Court of Human Rights (ECHR) (Case of Peck v. The United Kingdom, 2003).<sup>29</sup> In the same case, the ECHR however noted that "*recording of the data and the systematic or permanent nature of the record may give rise to [considerations about the interference with the individual's private life]*" (Case of Peck v. The United Kingdom, 2003). The privacy of persons and personal data is therefore threatened by the fact that drones are going to collect and transmit specific information to the command centre about what is happening at sea on an organized and regular way. As drones' surveillance aims, according to the research done on Frontex' activities, at SAR, preventing cross-border crime and unauthorised migration, it is likely that the drones will also collect personal data of individuals and vessels found in the Mediterranean and captured by the drones. These data can include images of persons and of the vessels based on those they can be possibly recognized. When we consider the scenario that the collected data will be involved into the EUROSUR network and hereby the future Common Information Sharing Environment (CISE)<sup>30</sup> between the MSs, there is quite a severe concern that the data are not secure

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<sup>28</sup> According to the Data Protection Directive 95/46/EC are personal data defined as "*any information relating to an identified or identifiable natural person; an identifiable person is one who can be identified, directly or indirectly, in particular by reference to an identification number or to one or more factors specific to his physical, physiological, mental economic, cultural or social identity*" (Directive 95/46/EC, 1995).

<sup>29</sup> Case Peck v. United Kingdom on the complaint about disclosure of closed circuit television (CCTV) footage to the media. The ECHR stated: "*The monitoring of the actions of an individual in a public place by the use of photographic equipment which does not record the visual data does not, as such, give rise to an interference with the individual's private life*" (Case of Peck v. The United Kingdom, 2003).

<sup>30</sup> The CISE for the surveillance of the EU maritime domain is being developed since 2009 and should serve the MS' authorities (from transport environmental protection, fisheries control, border control, general law

enough, although the EU claims that surveillance tools will collect personal data and exchange information about incidents and depersonalised objects in minimal scale (Hayes & Vermeulen, 2012). The EUROSUR Regulation namely enables bilateral and multilateral information exchange in near-real time (art. 7(1a)) providing an open-ended list of authorities with which the data can be shared (art. 18(1)). The depersonalisation of objects can be done by e.g. smudging faces and name of the boat, but this does not sufficiently secure that other indications can lead to the recognition of a person or a boat. Moreover, this is worrying as Frontex is allowed to exchange, process and store information (also including personal information) on JOs, pilot projects and rapid interventions in the communication network (art. 7(3) EUROSUR Regulation, art. 11 and 11c Amended Frontex Regulation). These personal data stored and processed by the Agency are not limited to data on persons suspected on reasonable grounds of the involvement in cross-border crime, facilitation of illegal migration or human trafficking, but data on all persons found in the Mediterranean. These personal data have to be depersonalized only in the risk analyses (Hayes & Vermeulen, 2012). On the other side, the exchange of personal data has to be limited on the extent to what is absolutely necessary for the purposes of detecting, combating and preventing cross-border crime, illegal migration and protecting and saving lives of migrants (art. 20(4) EUROSUR Regulation<sup>31</sup>). Although, every such information has to be examined, whether the exchange could harm the right of persons to apply for asylum and right not to be subject to torture, inhuman and degrading treatment or punishment or other fundamental rights (art. 20(5) EUROSUR Regulation<sup>32</sup>). The transmission of data on persons in need of international protection or asylum applicants is strictly prohibited (art. 20(5) EUROSUR Regulation). But all the referred provisions of the art. 20 EUROSUR Regulation only apply to the cases where information is exchanged with TCs and do not deny the possibility of exchanged information when persons can be identified between the MSs.

The current legal framework of data privacy is in the EU enhanced by the Data Protection Directive 95/46/EC but the application of this directive to border protection activities is unclear (Finn & Wright, 2012). This directive is on the way to be reformed by the General Data Protection Regulation that is planned to be adopted in late 2014 or early 2015 and will fully apply after a transition period of five years (European Parliament, 2014; Milligan, 2013). The provisions of the currently applied Directive 95/46/EC were transferred into national laws, i.e. it sets only general rules that should be equivalent all over Europe, but still some variations across MSs are possible. The adoption of the Regulation would set rules directly applicable in all MSs in the same manner. However, the Directive is still in force so MSs and Frontex have to obey it. The art. 6 (1) of this Directive states that personal data have to be “*collected for specified, explicit and legitimate purpose and not further processed in a way incompatible with those purposes*” (Directive 95/46/EC, 1995). This should secure that the data are not misused, i.e. it prevents the function creep of the data. However, the EUROSUR system enables the exchange of data across national authorities (border management, law enforcement, etc.), so there is a question how secure is the network against the function creep as after transmission of data nobody can effectively control for what purposes the data is used. The Directive also specifies that the processing of personal data cannot be done without the permission of the person concerned (art. 7 Data Protection Directive). At the same time, “*processing of personal data*” means all possible actions (also done by automatic means) including for example “*collection, recording, organization, storage, adaptation or alternation, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, blocking, erasure or destruction*” (art. 2 (b) Data Protection Directive). Such a broad scope of action would also imply that almost every operation

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enforcement, customs, defence) to get all information they need for an operation (European Commission, 2014e).

<sup>31</sup> The article 20(4) of the EUROSUR Regulation states: “*Any exchange of personal data with [TC] in the framework of EUROSUR shall be strictly limited to what is absolutely necessary for the purposes of this Regulation. It shall be carried out in accordance with Directive 95/46/EC, Framework Decision 2008/977/JHA and the relevant national provisions on data protection*” (EUROSUR Regulation, 2013).

<sup>32</sup> The article 20(5) of the EUROSUR Regulation states: “*Any exchange of information under paragraph 1, which provides a third country with information that could be used to identify persons or groups of persons whose request for access to international protection is under examination or who are under a serious risk of being subjected to torture, inhuman and degrading treatment or punishment or any other violation of fundamental rights, shall be prohibited*” (EUROSUR Regulation, 2013).

with images of persons / boats from a drone flying over the Mediterranean by the operator and then within the information system would require consent of the person or boat owner considered because public space surveillance recording visual data involves personal data. I wonder how this could be possible in practice at sea, as the drone cannot ask the monitored people for permission.

Nevertheless, the surveillance of specific areas, just as extern of the EU borders, will probably deter migrants, vessels, tourists, from using a specific route and make them to use another, longer and more dangerous route. No matter what their personal status is (economic migrant, refugee, tourist etc.), drones' surveillance will definitely inhibit the privacy of their personal behaviour. Drones will be able to follow the routes of picked vessels, take images of what the crew is doing, or even prevent the cell phone from receiving a signal. Another problem here is, that drones most often fly in unnoticed and unheard manner and they are valued mainly because of these characteristics. Therefore, people entering the shadowed area should be generally notified that they enter a surveillance area (art. 18 Data Protection Directive) as it is already done when one enters a city with public surveillance through closed-circuit television (CCTV) cameras. But this is hard to be executed at sea as you cannot put a signboard there. The notification would have to be in harbours of arrival and departure, i.e. also in TCs that are possible departure points to Europe. The large scale surveillance in the Mediterranean can also cause a "chilling effect"<sup>33</sup>, self-disciplining effect or even erode the society's expectation of privacy, therefore lead to normalization of previously unacceptable level of surveillance (Finn & Wright, 2012).

Nevertheless, according to the ECHR the interference by public authority with individuals' non-derogable rights may be necessary in the interest of national security, public safety or prevention of crime. Similarly, the Data Protection Directive states these interests as possible grounds of restriction of the scope of obligations and rights provided by the article 6 (1) (Directive 95/46/EC, 1995).<sup>34</sup> The Directive clarifies that if processing of sound and image data, e.g. video surveillance, is carried out for the purposes of public security, defence, national security, etc. then this action falls outside the scope of this directive (Directive 95/46/EC, 1995). But these exceptions are very broad and can involve very broad scope of actions. The main concern regarding the data privacy is the possibility of function creep, i.e. that data once collected and stored can be used for other purposes than what they have been primarily collected and stored for. This can evolve mainly when data will be exchanged to other national authority or other MS as the previous data provider cannot control what is further happening with the data. As Frontex and other MSs frame the border surveillance by drones' also as a matter of EU security, it can be seen how easily Agency's and other MS's action can fall outside the obligations of the EU data protection framework. Another concern comes with the actual analyses of stored data, i.e. data mining<sup>35</sup>. Although, the Data Protection Directive clearly prohibits MSs from "*processing of personal data, revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, trade-union membership, and the processing of data concerning health or sex life*" (art. 8(1) Data Protection Directive), however, in case of surveillance and incidents' examination this can prove to be very precarious as the analyses of data are often defined along lines of race, class, gender, sexuality, nationality and age (Finn & Wright, 2012). This reinforces concerns non-discrimination as the data operator will possibly drive attention only to the "usual suspects". Based on this, I think that the Data Protection Directive should be reformed as quickly as possible to address border surveillance more clearly, i.e. to state who, when and how is permitted to carry out analyses and assessment of the

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<sup>33</sup> In the law context, a chilling effect is the inhibition or discouragement of the legitimate exercise of a constitutional right because of the fear of potential or threatened prosecution or sanction (Wallace & Wild, 2010).

<sup>34</sup> The article 13 of the Directive states that MS may adopt legislations that restrict the scope of the obligations and rights provided in articles 6(1), 10,11(1), 12 and 21 when "*such restriction constitutes a necessary measures to safeguard: a) national security; b) defence; c) public security; d) the prevention, investigation, detection and prosecution of criminal offences, or of breaches of ethics for regulated professions; e) an important economic or financial interest of a [MS] or the [EU], including monetary, budgetary and taxation matters; f) a monitoring, inspection or regulatory function connected, even occasionally, with the exercise of official authority in cases referred to in c), d) and e); g) the protection of the data subject or of the rights and freedoms of others*" (Directive 95/46/EC, 1995).

<sup>35</sup> In computer sciences is data mining a practice of examining large pre-existing databases in order to generate new information (Oxford University Press, 2014b).

collected data from border surveillance as well as exchange the data. This is also important because of the fact that EUROSUR involving surveillance data started functioning at the end of the year 2013 without having the necessary legal framework for such personal data sharing network in the EU. This opinion was also brought about in 2012 by the Meijers Committee in its report on the proposal of the EUROSUR Regulation. There, the Committee argued that the Regulation should be postponed “*until the final adoption of clear and uniform rules on data protection*” as the reform of the EU data protection framework was in 2012 underway and the Regulation refers specifically to the Data Protection Directive 95/46/EC and the Framework Decision 2008/977/JHA in art. 13 and 20 (Meijers Committee, 2012). This situation still persists as the General Data Protection Regulation has not yet been adopted.

Other rights infringed by the possible deployment of drones are the fundamental rights of migrants, e.g. the right to asylum, right to liberty and security, prohibition of slavery and forced labour, freedom of movement and prohibition of collective expulsion (European Convention on Human Rights, 2010; Charter of Fundamental Rights of the European Union, 2000). Most of these rights are threatened mainly in case of European authorities or Frontex cooperating with TCs because often these states do not sufficiently guarantee the respect for fundamental rights and civil liberties. The situation of Frontex cooperating with TCs is closely elaborated in the next chapter. Individual MS can cooperate with TC on the basis of bilateral agreements. Unfortunately, most of these are not made public. Nevertheless, this does not restrict the information gained from such a cooperation to be included in the EUROSUR network (art. 20 EUROSUR Regulation). On the other hand, the agreements should comply with the European and international provisions on fundamental rights protection (art. 20(3) EUROSUR Regulation<sup>36</sup>). However, this cannot be fully guaranteed as these agreements are secret and therefore democratic accountability cannot be secured. Other rights are challenged by the deployment of drones solely because of the fact that surveillance on and external to the EU borders may result specific actions unwanted by the migrants, e.g. interception, diversion, notification to TC’s authorities. The drones can even inhibit the migrant’s right to apply for asylum as for example the Italian law is permitted to block a vessel with migrants the entry into the Italian territory (Bustelo, 2013).<sup>37</sup> According to the EUROSUR Regulation, the surveillance of external borders not only includes the pure monitoring but also detection, identification, tracking, prevention and interception of unauthorised migration (art. 2). Moreover, Frontex is obligated to inform the MSs on every incident in the pre-frontier area (art. 11(5) EUROSUR Regulation). With the word “incident” is meant a situation “*relating to illegal immigration, cross-border crime or a risk to the lives of migrants at, along or in the proximity of, the external borders*” (art. 3(i) EUROSUR Regulation). Therefore it does not involve only the situation a “boat with migrants” is in distress but actually the movement of all suspicious vessels and persons. Although, this provision is used to detect migrants in distress at sea in time, the EUROSUR Regulation was not accompanied by specific provisions on SAR. This again brings forward the argument that surveillance of external borders should serve more security related objectives than the humanitarian ones and raises concerns how far are the provisions on fundamental rights of migrants respected when handling migration as a security threat. The better the monitoring of the Mediterranean, the higher the risk that migrants will use more dangerous ways to get to Europe, paying even bigger sums of money to traffickers that are the only ones who are able to organize such a journey, and face danger of being mistreated or even enslaved before they actually reach their dream destination.

The migrant flows across the Mediterranean are characterised by the fact that on board of one vessel different people with various reasons why they undergo such a journey can be found, i.e. in most cases these migrants flows are mixed including for example people fleeing from persecution and economic migrants (European Union Agency for Fundamental Rights, 2013). Therefore, as stated in the Hirsi

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<sup>36</sup> The article 20(3) of the EUROSUR Regulation states: “*The agreements [with TC] ... shall comply with the relevant Union and international law on fundamental rights and on international protection, including the [EU Charter] and the Convention Relating to the Status of Refugees, in particular the principle of non-refoulement*” (EUROSUR Regulation, 2013).

<sup>37</sup> This enables the immigration law 189/2002 Legge Bossi-Fini (Bossi-Fini law) that tightens the provisions on aiding and abetting illegal migrants. This law received much criticism as some of its provisions may harm the migrant fundamental rights including the freedom to leave a country including its own and the principle of non-refoulement (Bustelo, 2013; France 24, 2013).

case, MSs have to examine the personal status and circumstances of every person found in the vessel before the state's authority can expel them (Case of *Hirsi Jamaa and Others v. Italy*, 2012). This is also guarded by the prohibition of collective expulsion in the art. 19 of the EU Charter and art. 4 of the Protocol No. 4 of the European Convention. Moreover, this procedure has to be performed as everyone has the right to emigrate (art. 2 Protocol No. 4 of the European Convention) and to apply for asylum (art. 18 EU Charter). The MSs respect the principle of non-refoulement included in the EU Charter and European Convention and hereby have the obligation not to submit anybody to the state where the person may face serious risk of death penalty, torture or other inhuman or degrading treatment or punishment (art. 19 EU Charter). Therefore, it is not proper to treat all unauthorised migrants as a threat to the EU and impose various security measures trying to stop migration to Europe. Nevertheless, according to the annulled, but still applying Decision 2010/252/EU, the border guards and Frontex can intercept boats on the high seas and disembark the migrants in the TC from where they departed (Council Decision 2010/252/EC, 2010) because the restriction on the freedom of movement is legitimate when justified on grounds of art. 2(3) Protocol No. 4 of the European Convention.<sup>38</sup> But stricter entry conditions to EU complemented by impervious borders can even more inhibit migrants' right to apply for asylum and lead refugees in the hands of human traffickers.

Another right of all people is the right to liberty and security (art. 6 EU Charter, art. 5 European Convention). This could be threatened by the pure surveillance by drones. It is possible that migrants will be forced to use another, longer and even more dangerous route that is not being monitored, leading to more deaths than saved lives. In these cases it is also even more possible that migrants fall into the hands of human traffickers and hereby threaten their security and liberty as only these will be able to organize the longer, more complicated journey to Europe.

Regarding the analysis, current over-arching legal provisions do not provide enough protection to the civil liberties of the people found in the area of a surveillance done by drones. This has been also confirmed by analyses of other scholars (Hayes & Vermeulen, 2012; Finn & Wright, 2012; Kenk, Križaj, Štruc, & Dobrišek, 2013). Moreover, EU is framing migration policy mainly in terms of security (Carling & Hernández-Carretero, 2011; Marin, 2013). Would then be drones' deployment for border surveillance proportional regarding the situation in the Mediterranean and the risks involved and is it necessary to limit the scope of the rights for the security related objectives? And can be assumed that the actions of Frontex related to the deployment of drones be foreseeable and predictable?

It is easier to start with the answer to the second question that is closely related to the transparency of Frontex activities and its respect to fundamental rights. By many scholars, this is being claimed to be insufficient (Perkowski, 2012; Hayes, Jones, & Töpfer, 2014). However, as every EU agency and institution, Frontex is subject to financial and activity supervision. The EP controls Agency's budget and activities, mainly in the perspective of respect for human rights obligations. Moreover, Frontex annually publishes annual report, sends it to the Commission, Council and EP, and the Agency completes risk analyses that are freely accessible. Nevertheless, a lot of Agency's documents, e.g. on results of test, demonstrations and projects, assessments of operational deployment, are not made public because of the sensitivity of security related data involved and making it accessible could put the source of information at risk. Also, little information is provided by Frontex on its operations. On the official websites of the Agency, the only revealed information to a particular operation is: aim, name, year, host country, participating countries, type, region, budget and time of operation. Moreover, to monitor what is happening at sea is difficult for independent media because they do not possess such assets to do it like the Agency or the MSs. To be positive, Frontex is now working on enhancing its respect for human rights and civil liberties. In the last few years, it adopted a Fundamental Rights strategy, signed a working agreement with UNHCR, European Asylum Support Office (EASO) and FRA, and designed a Fundamental Rights Officer (Marin, 2011b; FRONTEX, 2012; Perkowski, 2012). It can be therefore assumed that Frontex will further work on its transparency

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<sup>38</sup> The article 2 (3) Protocol No. 4 of the European Convention states that restrictions on the freedom of movement (hereby also right to emigrate) can be justified on grounds of the interests of national security and public safety, for the maintenance of public order, for the prevention of crime, for the protection of health or morals, or for the protection of the rights and freedoms of others (European Convention on Human Rights, 2010).

and accountability of its actions mainly because of the non-stopping pressure from non-governmental organizations (NGOs), EP, EC and wider public.

The answer to the question if drones' deployment by Frontex would be proportional and necessary is more complicated. As Frontex is mainly responsible for carrying out of risk analyses, the Agency is the main player in giving the arguments, i.e. legal grounds, for the actions related to the border management and surveillance. Frontex holds a central role in producing knowledge on migration within the EU (Gavelstad, 2013). These risk analyses are made public therefore everyone can read it and prove the correctness of the assessment of the proportionality. The proclaimed objectives of the possible drones' deployment are mainly these three: enhanced SAR, detecting and preventing cross-border crime, and detecting and preventing unauthorised migration. All of these objectives can be considered as legitimate because they have the goal of protecting human life and health, national and public security and order. Deploying drones' over the Mediterranean is also a suitable measure to achieve these objectives as drones are likely to detect and track small boats used for cross-border crime or unauthorised migration.

There are not many possibilities how to detect and track small boats that are commonly not registered anywhere as they try to pass through unnoticed. Imposing registration obligations on all vessels sailing in the Mediterranean would impose an acceptable burden for the vessels' owners as well as national administration authorities. However, it will not bring the desired effect as people engaging in unauthorised migration or cross-border crime would try to avoid these as well. Frontex and MSs currently use manned vessel and aircraft patrols to detect these vessels, but their deployment is not very efficient as manned vessels and aircrafts have limitations in time and are costly. The alternative of drones is considered to be cheaper in the long-term as drones save fuel and costs of human involvement. RPAs or OPAs that are controlled and steered by an operator, in concept only slightly differ from the manned patrols. Considering the case of fully automated drones, the case becomes very precarious as these drones are pre-programmed for specific tasks. There are concerns that the technology is not yet so far developed to effectively prevent accidents and to secure that the drone reacts properly at an unexpected situation (Nolin, 2012). The main concern about full automisation is that it will be hard to allocate legal responsibility for the action of the drone as there is no human involvement (Nolin, 2012). It can be therefore concluded that deployment of RPAs or OPAs would constitute the least restrictive measure to detect and trace small boats in the Mediterranean.

The benefits of drones' deployment are clear: save migrants' lives as they often come into problems when trying to reach the EU on board of unseaworthy vessels, combat cross-border (usually well organized) crime including goods and drug smuggling and trafficking in human beings, or preventing unauthorised migration and hereby protecting the public security and order by decreasing the health and economic risks that migrants can impose to the public system of a MSs<sup>39</sup>. Protecting the external borders from unauthorised migration is also important because there are no border checks within the EU and many migrants are likely to move to other MSs as soon as they reach Europe making it hard to track and possibly expel them on grounds of non-valid stay. The costs of drones' surveillance are framed not in economic but legal terms. As it has been shown previously in this chapter, the deployment of drones infringes a lot of privacy rights and rights of migrants. I identified that current legal framework does not sufficiently address the possibility of large scale surveillance of EU' external borders, and mainly the area beyond by the deployment of drones. There are considerable gaps in the protection of civil liberties, i.e. privacy rights, and fundamental rights of migrants. Moreover, regarding the increased process of securitization of migration and unresolved problems concerning SAR operations evokes the idea that drones' deployment by Frontex should serve more security related objectives than the humanitarian ones making use of various legal exceptions. The EU, including its MSs, can even come into conflict between its actual actions and its founding values, i.e. *“respect to human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities”* (art. 2 TEU). But on the other hand, the EU cannot afford to allow everyone to enter its territory whatever their migratory status is. States have the very basic right to control the access to their territory. But it is necessary to handle and regulate migration in much broader perspective than with surveillance technologies because drones do not have

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<sup>39</sup> Migrants import some diseases as third countries do not have so high standards of public health care. Moreover, unauthorised migrants are likely to engage in illegal employment posing economic losses to the state.

the capability to resolve the roots of the problem why people migrate in the first place or to fully stop cross-border crime. I argue that the deployment of drones in the Mediterranean would do more harm than good until the necessary legal framework is improved to clearly address the possibility of the surveillance by drones and giving enough protection to civil liberties of all people sailing the Mediterranean and fundamental rights of migrants. But this involves the importance that the public should get as much information as possible about the activities of national border guards and Frontex to secure the democratic accountability of those bodies and their activities and to assess the necessity of these activities.

## **4. EU's Cooperation with Third Countries in the Area of Border Management**

In order to more effectively combat unauthorised migration and cross-border crime, Frontex cooperates along with TCs on the basis of working arrangements. This is possible on the basis of art. 13 of the amended Frontex Regulation from the year 2011. The main areas of operational cooperation with these countries build information exchange, risk analysis, training, research and development, joint operations and pilot projects. These aspects are part of working arrangements signed with the relevant authorities of TCs. Currently, there have been 18 working arrangements signed with TCs' authorities, including only Turkey representing the departure countries of unauthorised migration and cross-border crime in the Mediterranean. Nevertheless, Frontex is planning to expand its cooperation also with other North African countries like Libya, Morocco, Egypt, Tunisia as well as Mauritania and Senegal that have been involved in the Hera operation on basis of bilateral agreements with Spain (FRONTEX, 2014d). Namely, the cooperation with TCs in migration and surveillance raises many concerns because of the poor safeguards for democratic standards and human rights.

This chapter will therefore shortly enhance the previous analysis on surveillance by drones challenging the civil liberties and fundamental rights of migrants about the case of the possible cooperation with TCs in these issues.

### **4.1 Civil Liberties and Fundamental Rights Concerns in Third Countries and Cooperation with Third Countries for Better Border Management**

Among the North African countries responsible for the departure of unauthorised migrant and other vessels engaging in cross-border crime count Egypt, Turkey, Libya, Algeria, Morocco and Tunisia, Senegal and Mauritania. From these countries only Morocco did not sign the UN Protocol against the Smuggling of Migrants by Land Sea and Air, supplementing the UN Convention against Transnational Organized Crime. But Mauritania, Algeria and Turkey prohibit leaving their country in irregular manner applied to both, nationals as non-nationals, under the threat of fine or imprisonment. Libya and Egypt applies this only to non-nationals (FRA, 2013). Moreover, according to the Freedom House Index<sup>40</sup> among these countries only Senegal is being considered as fully free regarding the respect to political rights and civil liberties (Freedom House, 2013). Therefore, there are serious concerns that the civil liberties and fundamental rights are not sufficiently protected in these countries or are even breached in larger scale. Moreover, neither European Convention nor EU Charter and Data Protection Directive are legally binding outside Europe as long as other, non-EU state's authority examines the full and effective control over a person.

An investigation on cross-border crime needs to cover all aspects of the organization network, involving both the countries of origin and of destination. States have the obligation to cooperate effectively with other countries to investigate events of cross-border trafficking, even if that event happened outside their territory (Case of Rantsev v Cyprus and Russia, 2010). Therefore, there are commitments expected of TCs to cooperate, as it is in interest of both parties. Moreover, the European states have the obligation to protect individuals against slavery and inhuman treatment like human trafficking according to the art. 4 of the European Convention. The establishment of cooperation with TCs also follows the objective of promoting European border management standards and as well as

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<sup>40</sup> Freedom House Index is a standard-setting comparative assessment of global political rights and civil liberties published annually in the publication *Freedom in the World* by Freedom House.

respect to civil liberties and fundamental rights within this area (art. 14 Amended Frontex Regulation). This educational objective is for example purpose of joint patrols where Frontex officers are present on board of border guard's vessels of TCs. Although, there are no sufficient protections for human rights and civil liberties in the North African countries, Frontex still sees them as partners in issues of combating unauthorised migration and cross-border crime. As Frontex does not have any working arrangement with the referred African countries (except Turkey), cooperation is mainly based on bilateral agreements between the MSs and the TCs that are often not made public. The MSs can cooperate with TCs even without the involvement of the Agency (art. 16(3) SBC). Also, the MS can incorporate the information gained from cooperation with TC into its national situational picture in EUROSUR (art. 9(2h) EUROSUR Regulation) and exchange the information with TC according to art. 20 of this Regulation. Although, in 2012 the Meijers Committee proposed that these bilateral agreements should be disclosed to the EC (Meijers Committee, 2012), the adopted EUROSUR Regulation provides an obligation of MSs to just notify such agreement to the EC (art. 20(2) EUROSUR Regulation<sup>41</sup>) to ensure that the relevant provisions of the agreement comply with the EUROSUR Regulation. EC will not assess the compliance with other European and international legal provisions, including those on fundamental rights. From the provisions of the art. 20 EUROSUR Regulation it is not clear what actually happens when the EC denies the agreement to comply with the provisions of the EUROSUR Regulation or gives any recommendation to the MS to change some provisions of the agreement. It can be therefore assumed that the EC has only limited legislative powers to influence the agreements between MSs and TCs and is hereby more dependent on its powers as a political actor. The lawsuit before the ECJ seems rather as an extreme case. Although these agreements must comply with the European and international provisions on human rights (art. 20(3) EUROSUR Regulation) there is no systematic process of examination if the agreements really comply with those provisions. Regarding the secrecy of some agreements, they are not transparent and undermine the principle of democratic accountability with a danger to possibly harm migrants in their rights as it was shown in the Hirsi case concerning an agreement between Italy and Libya that was not made public.

An effective cooperation with TCs is also important for effective repatriation policy. The EU tries to establish re-admission agreements with TCs so that these will readmit their own citizens as well as those migrants who have transited through their territory to the EU. This gives also an indirect signal to further migrants who still plan to reach EU that unauthorised migration is futile but it is broadly known that this has only limited effect as migrants stay determined to get to Europe (Carling & Hernández-Carretero, 2011). This cooperation with TCs where only limited protections for fundamental rights and civil liberties exist threatens the migrants' privacy rights as well as rights to seek asylum, right to emigrate and not to be subjected to torture or degrading treatment.

For an effective cooperation with other countries, it is necessary to exchange relevant data on the situation concerned. It is most probable that the information collected from border surveillance tools is going to be stored in the EUROSUR network. The EUROSUR Regulation handles the exchange of data with TCs in art. 20. The art. 20(5) indirectly states that personal data can be exchanged with TCs. This concerns mainly persons who are not refugees, asylum applicants or who are not at risk of being tortured, subjected to inhuman and degrading treatment or punishment in that TC. The Data Protection Directive handles the transfer of data to TCs in art. 25 ff. (Directive 95/46/EC, 1995). The Data Protection Directive has an extraterritorial reach. The Directive states that "*the transfer of personal data to a [TC] which does not ensure an adequate level of protection must be prohibited*" (recital 57, Data Protection Directive). With those provisions also the personal information exchange via EUROSUR has to comply (art. 20(4) EUROSUR Regulation). Nevertheless, the Regulation 1052/2013 establishing EUROSUR (EUROSUR Regulation) provides an open-ended list of datasets and agencies that can be included into the information network (Hayes & Vermeulen, 2012) and although the Regulation states that exchange of personal information should be limited to the extent

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<sup>41</sup> The article 20(2) of the EUROSUR Regulation states: "*Before any agreement [with TC] ... is concluded, the [MS] concerned shall notify the agreement to the Commission, which shall verify that its provisions which are relevant for EUROSUR comply with this Regulation. Once the agreement is concluded, the [MS] concerned shall notify it to the Commission which shall inform the [EP], the Council and the Agency thereof.* (EUROSUR Regulation, 2013).



what is absolutely necessary (art. 20(4)), it is nowhere clearly defined in which situations this absolute necessity arises. This, combined with the unsound legal system of TCs and the sanctions imposed by them for irregularly leaving of the country, causes serious concerns for fundamental rights of migrants leaving the TC whatever the reason. Although the Data Protection Directive specifies that data cannot be processed, i.e. stored or exchanged etc., without the permission of the person concerned (art. 7(a)), this does not apply as soon as state's authority justifies the collection on the basis of national security, public safety or other grounds specified in the art. 13 Data Protection Directive. And these grounds are actually the mainly public made objectives for the deployment of drones over the Mediterranean. It can be therefore feared that the collection of data on migrants crossing the sea will spread widely without obeying the EU legal framework on data protection. This poses serious risks to persons that may be in need of international protection as their data can be freely collected and transmitted without extensive examination on their migratory and personal status.

Moreover, neither the MSs nor Frontex can effectively control what is happening with that data nor for what it is used after the data is transmitted to TCs. It can jeopardise the civil liberties and fundamental rights of migrants as people can be identified on the basis of provided data and hereby face risks of being tortured, imprisoned etc. (Kenk, Križaj, Štruc, & Dobrišek, 2013). The drones deployed external to EU borders could therefore have considerable impacts on migrants searching asylum because of being threatened on their life and human dignity in TCs. These persons, with the help of drones operating in the pre-frontier area (also including the territory of TCs), can be notified and intercepted before they actually reach the high seas without being extensively examined on their migratory status. This would then infringe the principle of non-refoulement and provisions on prohibition of collective expulsion. Moreover, even if people are not refugees, drones' surveillance would inhibit their right to emigrate and if they are intercepted before their reach Europe they can be subjected to considerable threats of being imprisoned or fined for their irregularly leaving of the country. The surveillance beyond the external borders of the EU (mainly in the territorial waters of TCs) complemented by the cooperation with North African TCs is in my view not proportionate to the risks as the threat to fundamental rights of migrants is much higher than the threat to EU public security, order and health.

## 5. Conclusion

The high attention towards the Mediterranean border of the EU proved as being reasonable mainly in the field of unauthorised migration to Europe. Hundreds of missing and dead every year make this route to Europe one of the most dangerous in the world. Moreover, even when the journey is successful for the migrant, overcrowded migrant facilities and threat of expulsion, do not make the situation any better. It is therefore no wonder that the southern MSs try to impose measures to detect and prevent the influx of unauthorised migrants, as well as to uncover cross-border crime such as drug smuggling and human trafficking. Drones are widely considered to be an answer to the challenge how to detect these people in such a big area as the Mediterranean. The main objectives for the deployment of drones for border surveillance are: detect and prevent unauthorised migration and cross-border crime as well as safe lives at sea through early detection of vessel in distress.

In my research, I firstly looked at the topic of Frontex possibly using drones for border surveillance. The research on Frontex activities on drones showed that the Agency can be considered as prepared to use the drones-technology in the near future. It is also supported by the fact that the Agency received new powers by the amended Frontex Regulation in 2011, e.g. acquisition of own technical equipment. Also, there have been and are a lot of projects financed by the EU on this topic supporting the knowledge and development of this technology throughout Europe. My research provided an overview of both, the activities on drones by Frontex as well by the EU under the FP7. The only obstacle for a large scale deployment of drones in non-segregated airspace for border surveillance is the current aviation law. This allows only deployment of drones either in segregated airspace or to the distance of VLOS, as there is not any reliable sense-and-avoid system worldwide yet to prevent collisions.

Secondly, the research analysed how the drones' deployment would alter the current border surveillance. From the analysis it was clear that the change would be immense as drones are able to provide near-real time information from remote areas with much less resources. It found that the SBC does not sufficiently address the topic of surveillance beyond the EU external borders. Moreover, this

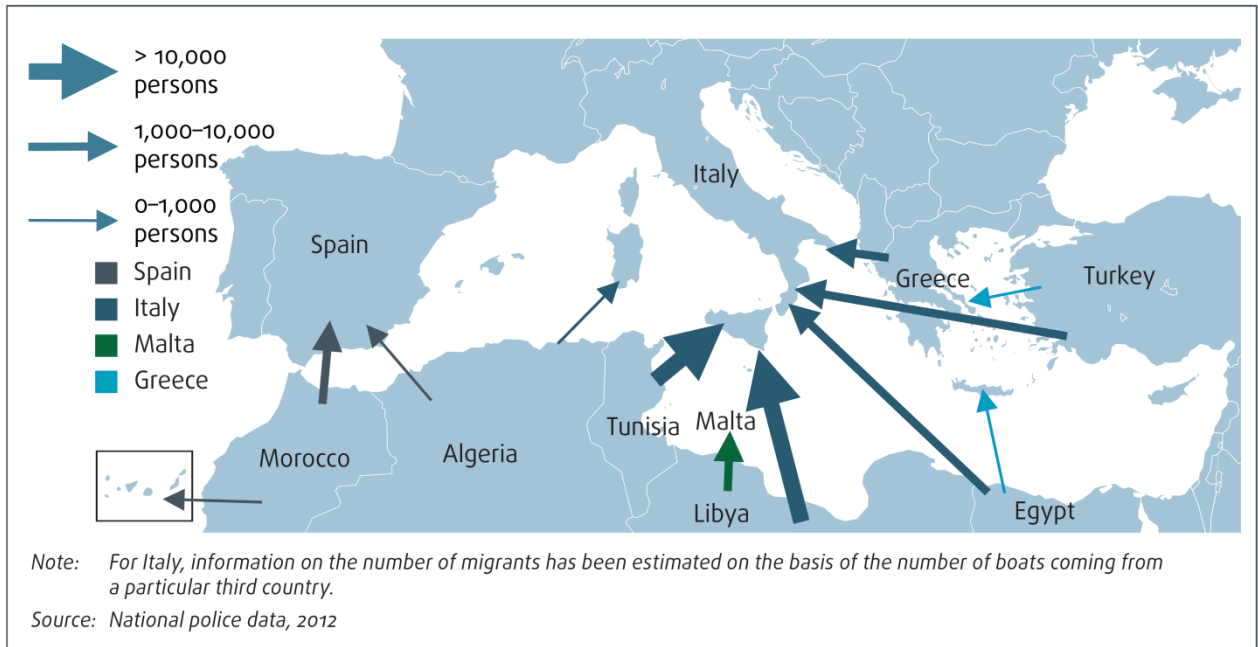
technology does not solve the problem of who is responsible for carrying out SAR operation when a vessel in distress is located, shown for example by the Salamis case. This puts forward an argument that drones serve more security related objectives than the humanitarian ones to save lives at sea. The drones alone are only a sense-and-detect technology that do not decide whether the people are in distress, whether and how to rescue them and where to disembark them. Moreover, the deployment of drones in an area of frequent migrant route can lead to even more dead and missing, as migrants are likely to shift to even more dangerous and longer routes to avoid detection by the authorities.

The main section of the thesis analysed to what extent the drones' deployment challenges the privacy rights and fundamental rights of migrants. It found that the current legislation does not sufficiently address the large scale border surveillance by drones posing a threat to various rights. There are concerns that MSs and Frontex could collect and exchange personal data how they want, justified by the objectives of national security, public order and health. In these cases, the strict rules of data protection do not have to be applied. Because in the EU, migration is perceived as a security threat, this scenario is more than possible. Moreover, drones can inhibit fundamental rights of migrants, even threatening migrants and refugees' lives in relation of cooperation with North African TCs where sufficient safeguards for fundamental rights are not secured. Neither the MSs nor the Frontex or the EU can control what is happening with the data after it has been transmitted to TCs. In the European perspective, information collected by drones followed by data mining can reinforce discrimination as the operators are likely to look for the "usual suspects". Put together with the lack of transparency of Frontex and MSs' activities in remote areas of the sea, plans on the deployment of drones followed by the operation of personal data are unsettling. On the other hand, the EU cannot afford to allow everybody who wants it to enter its territory. Nevertheless, the EU has the obligation to respect fundamental rights even beyond its borders. The topic is even more sensitive as nobody can decide whether he will be caught by the eye of the drone or not. Nobody can be excluded from its sight. I am therefore of the opinion that the EU should pass a legislation clearly stating who, when and where is permitted to use drones for border surveillance and what has to be done with the data collected by drones. Otherwise, the EU is heading to experience the normalization of previously unacceptable level of surveillance and a regime where action comes before legislation breaching the founding values of the EU, e.g. respect for human dignity, freedom, democracy, equality, the rule of law and respect to human rights.

## Attachments

Fig. 1

### Migration via the Mediterranean



Source: European Union Agency for Fundamental Rights, 2013, p. 9

Fig. 2

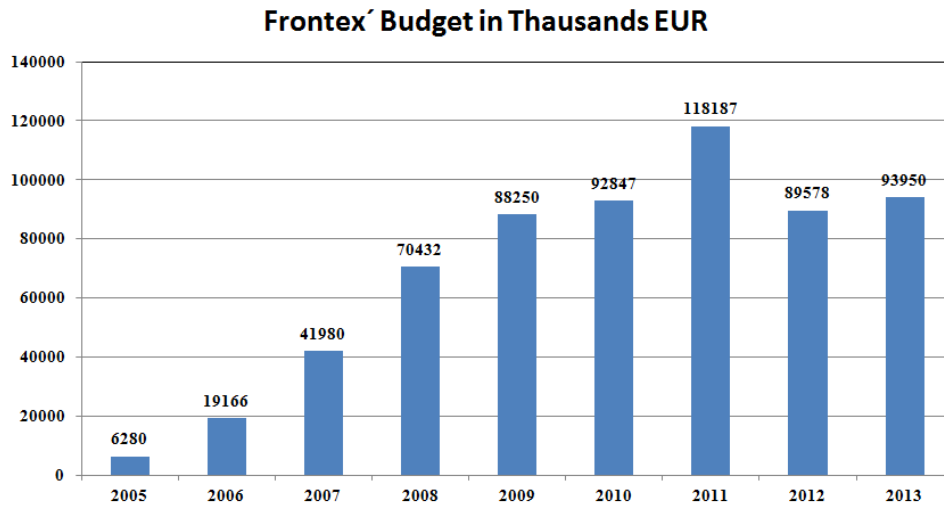
### Third country national arrivals by sea 2004-2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Greece	3047	3371	3456	9240	15314	10165	1765	757	2960	10481
Spain	15671	11781	39180	18056	13424	7285	3632	5441	3804	3000
Italy	13635	22939	22016	20455	36951	9573	4406	62692	8717	35075
Malta	1388	1822	1780	1702	2704	1173	28	1574	2010	1335

Own account with data retrieved from European Union Agency for Fundamental Rights (2013), De Bruycker, Di Bartolomeo & Fargues (2013), Souliotis (2014)

Fig. 3

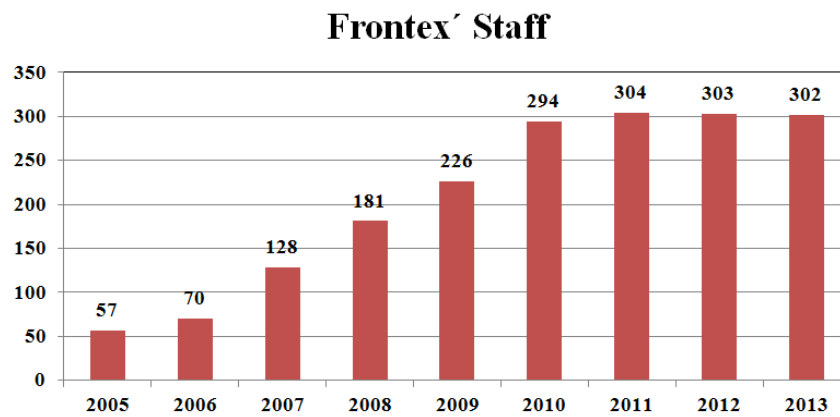
Frontex' Budget Development 2005-2012



Own account with data retrieved from Frontex' General Report for years 2005 till 2013

Fig. 4

Development of Frontex' Staff 2005-2013



Own account with data retrieved from Frontex' General Report for years 2005 till 2013

Fig. 5

Overview of Frontex' Activities on Drones since 2007

WK = Wokshop, D = Demonstration, S = Study, IS = Interest Session, P = Project

Start	Place	Activity	Name	Description
2009	Imatra (FIN)	WK	RPA and Land Border Surveillance	Demonstration of mini RPA and Aerostats
2010		P	Remote Sensing and Detection Technology	<ul style="list-style-type: none"> <li>- Keep MSs informed concerning new technical/technological developments in field of remote sensing and detection technologies</li> <li>- Examining/validating detection capabilities of existing surveillance tools</li> <li>- Trying-out of new technologies for border surveillance (pilot projects in MSs and/or in the context of JOs)</li> </ul>
2010	Bulgaria	WK/D	Small UAVs and Fixed Systems for Land Border Surveillance	<ul style="list-style-type: none"> <li>- Debate main challenges related to UAV technology</li> <li>- It use for more efficient and effective green border surveillance</li> <li>- Interoperability and integration of sensors</li> </ul>
2010	Imatra (FIN)	WK	RPA and Land Border Surveillance	<ul style="list-style-type: none"> <li>- Demonstration of mini RPA and Aerostats</li> <li>- Focus on Land Borders</li> </ul>
2011		P	Remote Sensing and Detection Technology	- Current developments in the field of remote sensing and detection technology
2011		S	Study on Unmanned Aerial Vehicles (UAVs) for Border Surveillance – performance & efficiency	
2011		WK	Border Surveillance Workshop	<ul style="list-style-type: none"> <li>- Focus on integrated sensors and platforms</li> <li>- Also other technical solutions for border surveillance, e.g. UAVs</li> </ul>
2011	Aktio (GR) Istres (FR)	D	RPAS Demonstration Sessions France and Greece	<ul style="list-style-type: none"> <li>- Participation of 20 MS and 16 companies (EU, CH, USA, Israel)</li> <li>- Focus on maritime borders</li> <li>- Medium and long endurance UAV</li> <li>- SAR</li> </ul>
2012		P	All Eyes 2012	<ul style="list-style-type: none"> <li>- Aerial, ground and sea surveillance (sensors, platforms, advanced system solutions)</li> <li>- Aims and envisages the use of satellites and RPA</li> </ul>
2012		S	Frontex – Remotely Piloted Aircraft Systems Study	<ul style="list-style-type: none"> <li>- Conducted with TU Madrid and City Isdefe;</li> <li>- technical, market, operational information about RPAs;</li> <li>- feasibility, cost-efficiency</li> </ul>

2012	Sofia (BG)	WK	RPAS Border Surveillance Workshop	<ul style="list-style-type: none"> <li>- 14 MS, EASA, EUROCONTROL, JRC, BIOG, CNSDR, SRTI, 25 technology providers</li> <li>- Use of OPA and RPAS for border control and SAR</li> <li>- Technical + operational features, payloads, legislation, cost-efficiency, best practice, lessons learned</li> </ul>
2012			Maritime Domain	<ul style="list-style-type: none"> <li>- Operational assessment of Medium Altitude Long Endurance (MALE) RPAS platform and sensor capabilities</li> <li>- cost effectiveness compared to manned flights</li> </ul>
2012	Aktio (GR)	D		<ul style="list-style-type: none"> <li>- Thales, Aerovisión, IAI</li> </ul>
2012	Bulgaria	WK	Potential of OPA and RPAS potential for European Border Surveillance and SAR operations	<ul style="list-style-type: none"> <li>- Aerial Border Surveillance Trials Land and Sea</li> </ul>
2012	Spain		Implementation of the Study on RPA for Border Surveillance – Performance and Efficiency	<ul style="list-style-type: none"> <li>- Provide MS with technical, operational and market information concerning RPAs use on land and sea borders</li> <li>- Feasibility and cost-efficiency assessment</li> </ul>
2013		P	All Eyes 2013	<ul style="list-style-type: none"> <li>- Follow-up to Remote Sensing and Detection Technology Project</li> <li>- Border surveillance and detection technologies (current developments in sensors and platforms, broadband communications and data fusion systems, integrated system solution for border surveillance)</li> <li>- Functionality, feasibility, capabilities of RPA, radar and ground detection sensors</li> <li>- Integration and exploitation of data</li> </ul>
2013	Alexandroupolis (GR) Almeria (SP)	WK/IS	Aerial Border Surveillance Trial 2013	OPA for border surveillance
2014	Warsaw (PL)	WK	Border Surveillance Workshop	<ul style="list-style-type: none"> <li>- Challenges and opportunities of RPAS and OPA</li> <li>- Legal context, industry update in OPAs, lessons learned, optimized border surveillance</li> </ul>
2014	Helsinki and Imatra (FIN)	WK/D	Border Surveillance Demonstration and Workshop Finland 2014	<ul style="list-style-type: none"> <li>- Hovering electro-optical systems for sea and land border surveillance</li> <li>- 6 leading companies technology demonstrations</li> </ul>

Own account with data retrieved from Frontex News, General Reports of Frontex 2010-2013, presentation by Mr. Kolev 2012, presentation by Mr. Beugels 2011, Statewatch News Online 2013, and news reports by Mr. Nielsen

Fig. 6

Overview of projects on drones-technology and border surveillance funded under FP7 2007-2013

Start	End	Name	Short Description	Link
2008	2011	Autonomous Maritime Surveillance System (AMASS)	Observation and security of wide critical maritime areas in order to reduce actual and potential illegal immigration and cross-border crime with hydrophone arrays, cameras, UAV, thermal imagers	<a href="http://cordis.europa.eu/projects/rcn/86259_en.html">http://cordis.europa.eu/projects/rcn/86259_en.html</a>
2008	2012	Transportable Autonomous Patrol for Land Border Surveillance (TALOS)	Develop autonomous and adaptive system for protecting European Borders; aerial and ground UV	<a href="http://cordis.europa.eu/projects/rcn/86712_en.html">http://cordis.europa.eu/projects/rcn/86712_en.html</a>
2008	2011	Wide Maritime Area Airborne Surveillance (WINAAS)	Building a block of maritime surveillance with the potential for reduced cost of operation, more autonomous and improved efficiency through air vehicles with reduced or zero onboard crew	<a href="http://cordis.europa.eu/projects/rcn/88640_en.html">http://cordis.europa.eu/projects/rcn/88640_en.html</a>
2009	2013	Air Guidance and Surveillance (ARGUS 3D)	Improve detection of manned and unmanned platforms, managing 3D position data in all regions, 24 hours a day and in all weather conditions	<a href="http://cordis.europa.eu/projects/rcn/93528_en.html">http://cordis.europa.eu/projects/rcn/93528_en.html</a>
2010	2014	Sea Border Surveillance (SeaBILLA)	Cost-effective sea border surveillance systems, advanced technological solutions, demonstrations	<a href="http://cordis.europa.eu/projects/rcn/94732_en.html">http://cordis.europa.eu/projects/rcn/94732_en.html</a>
2010	2012	Open Architecture for UAV-based Surveillance System (OPARUS)	identify ways to develop an open architecture for the operation of unmanned air-to-ground wide area land and sea border surveillance platforms in the EU; Architecture defined optimized for illegal immigrants detection, identification and tracking at EU borders	<a href="http://cordis.europa.eu/projects/rcn/95504_en.html">http://cordis.europa.eu/projects/rcn/95504_en.html</a>
2010	2014	Integrated System for Interoperable Sensors & Information Sources for Common abnormal vessel behaviour detection & Collaborative	Innovative sea border surveillance system implementing key existing and in development capabilities to track all vessel movements to early	<a href="http://cordis.europa.eu/projects/rcn/96259_en.html">http://cordis.europa.eu/projects/rcn/96259_en.html</a>

		Identification of Threat (I2C)	identification and report on threats (radars, aircraft patrols, USV)	
2011	2014	Protection of European Seas and Borders through the intelligent use of surveillance (PERSEUS)	Improve detection and identification of non collaborative/suspicious small boats and low flying aircraft, increasingly automated detection, demonstrations (5 exercises in 2 campaigns)	<a href="http://cordis.europa.eu/projects/rcn/97515_en.html">http://cordis.europa.eu/projects/rcn/97515_en.html</a>
2011	2015	Virtual centre of excellence for ethically-guided and privacy-respecting video analytics (VIDEOSENSE)		<a href="http://cordis.europa.eu/projects/rcn/100051_en.html">http://cordis.europa.eu/projects/rcn/100051_en.html</a>
2011	2014	Automatic Data relevancy discrimination for a privacy-sensitive video surveillance (ADDPRIV)	propose novel knowledge and developments to limit the storage of unnecessary data, to be implemented on existing multi-camera networks in order to make them better to comply with citizen's privacy rights	<a href="http://cordis.europa.eu/projects/rcn/98125_en.html">http://cordis.europa.eu/projects/rcn/98125_en.html</a>
2011	2014	Supporting fundamental rights, privacy and ethics in surveillance technologies (SAPIENT)	specify for policy makers, technology developers and other stakeholders how and when smart surveillance should be used and the criteria to verify that surveillance respect the privacy of citizens; provide strategic knowledge on the state of the art of surveillance studies, emerging smart surveillance technologies and the adequacy of the existing legal framework, consider the discourse, ethics and politics of security and surveillance today and the extent to which the public has accepted the surveillance society	<a href="http://cordis.europa.eu/projects/rcn/98055_en.html">http://cordis.europa.eu/projects/rcn/98055_en.html</a>
2012	2015	Surveillance, privacy and security: a large scale participatory assessment of criteria and factors determining acceptability and acceptance of security technologies in Europe (SURPRISE)	consult with citizens from several EU member and associated states on the question of the security-privacy trade-off as they evaluate different security solutions	<a href="http://cordis.europa.eu/projects/rcn/102076_en.html">http://cordis.europa.eu/projects/rcn/102076_en.html</a>
2012	2016	Integrated components for assisted rescue and unmanned search	equip respondents with a comprehensive and integrated set of unmanned	<a href="http://cordis.europa.eu/projects/rcn/102326_en.html">http://cordis.europa.eu/projects/rcn/102326_en.html</a>



		operations (ICARUS)	search and rescue tools, increase situational awareness of human crisis	
2012	2015	Deployable SAR integrated chain with unmanned systems (DARIUS)	reach effective levels of interoperability so these systems can be shared between several organisations, project solutions will be evaluated in real conditions (e.g. maritime SAR, earthquake, forest fire) designed by the end-users	<a href="http://cordis.europa.eu/projects/rcn/102362_en.html">http://cordis.europa.eu/projects/rcn/102362_en.html</a>
2012	2015	Advanced video surveillance archives search engine for security applications (ADVISE)	design and develop a unification framework for surveillance-footage archive systems, in an effort to deal with the increasingly critical need to provide automated and smart surveillance solutions	<a href="http://cordis.europa.eu/projects/rcn/102502_en.html">http://cordis.europa.eu/projects/rcn/102502_en.html</a>
2012	2015	Surveillance: Ethical issues, legal limitations, and efficiency (SURVEILLE)	review the impacts of different surveillance systems and help manufacturers and end-users better to develop and deploy these systems; assess surveillance technology for its actual effectiveness in fighting crime and terrorism, for its social and economic costs, and will survey perceptions of surveillance in the general public and certain identified target groups	<a href="http://cordis.europa.eu/projects/rcn/102644_en.html">http://cordis.europa.eu/projects/rcn/102644_en.html</a>
2013	2015	UAV Based innovative means for land and sea non-cooperative vehicles stop (AEROCEPTOR)	Increase the capability of law enforcement authorities to remotely, safely, externally, control and stop non-cooperative vehicles in both land and sea scenarios by means of UAV	<a href="http://cordis.europa.eu/projects/rcn/106475_en.html">http://cordis.europa.eu/projects/rcn/106475_en.html</a>
2013	2015	Privacy preserving infrastructure for surveillance (PARIS)	based on theoretical framework balancing surveillance and privacy/data protection, examples of social anthropological legal technological frameworks	<a href="http://cordis.europa.eu/projects/rcn/106634_en.html">http://cordis.europa.eu/projects/rcn/106634_en.html</a>
2013	2016	Collaborative evaluation of border surveillance technologies in maritime environment by pre-operational validation of innovative solutions (CLOSEYE)	identify problem of the operation and technical framework that would increase the situational awareness and improve the reaction capability of authorities surveying the external borders of the EU	<a href="http://cordis.europa.eu/projects/rcn/108227_en.html">http://cordis.europa.eu/projects/rcn/108227_en.html</a>

2013	2015	Trusted Vessel Information from Trusted on-board Instrumentation (TRITON)	Civilian and Commercial Maritime Control – Surveillance and Safety	<a href="http://cordis.europa.eu/projects/rcn/111021_en.html">http://cordis.europa.eu/projects/rcn/111021_en.html</a>
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