

Deploying drones in policing southern European borders: constraints and challenges for data protection and human rights³

Abstract

The chapter explores the challenges underlying the policy choice of deploying drone-technology in the area of border surveillance, with specific reference to the surveillance of European Union (EU) Member States' external southern borders.

Border surveillance is one of the top priorities of the Member States of the EU for several reasons: the first is the management of, or *rectius*, the fight against irregular migration, and cross-border crime. Within this context, public agencies (at both the national and the European level) are investing important resources in deploying the most up-to-date technologies, in an attempt to stop undesired migrants. The deployment of drones for border policing purposes is already a reality in the US, and also in some EU Member States. Frontex has also devoted attention and resources to exploring the possibility of deploying drones in border surveillance, as they are seen as beneficial assets in the perspective of EUROSUR.

The aim of this chapter is to explore the recent developments constituted by the deployment of drone technology in border surveillance. The chapter firstly introduces the actors, policies and practices in the sphere of border management, specifically in the area of border surveillance (2); then it discusses the use of drone technology for border surveillance, looking at its potentialities but also at its current shortcomings (3); it will then move toward the regulatory framework enabling the safe deployment of drones under aviation law and on border surveillance (4) and present the constraints represented by fundamental rights and data protection rules on drone technology and the challenges drones represent for the human rights of migrants (5), before concluding that drone technology might entail a further securitization of border surveillance, together with a shift toward preventive border surveillance (6).

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³ Though the chapter is the product of a common conception, sections 1, 2.2, 4.2, 5.1, 5.2 can be attributed to Luisa Marin, and sections 2.1, 3, 4.1 are attributed to Kamila Krajčíková. The conclusions are common.

Keywords: drones, UAVs, RPAS, border surveillance, Frontex, EUROSUR, operation *Mare Nostrum*, Schengen Borders Code, privacy, data protection

1. Introduction

One of the main achievements of the European integration process is the free movement of persons, which has been completed by the Schengen process. Schengen has meant the removal of internal border checks, on the one hand, but, on the other hand, the strengthening of external border controls, and the gradual introduction of an integrated management system for external borders (art. 77, TFEU, 2012). In the last few years, border policing⁴ has developed more and more as an autonomous policy field, according to the Treaty framework, and steps have been taken toward shaping integrated border management (IBM) (Mungianu, 2013).

While the EU together with the Member States have increased their efforts in policing their external borders, the persistent poverty and the recent political instabilities of the North African and Middle East regions have increased the phenomenon of boat migration, i.e., migrants who decide to risk their lives in order to reach one (Northern) European state in (often unseaworthy) vessels; lacking the possibility of reaching Europe legally, migrants resort to illegal networks of smugglers. The North African coast is the main departure point for irregular migration. Although the maritime border crossings account for about 7 % of overall migration to the EU, irregular migration by sea is always high on the agenda of political priorities of the EU (FRA, 2013). Moreover, irregular migration by sea is problematic because of the high death toll of migrants. In 2011, the Mediterranean was declared as the most deadly water area for refugees in the world by the United Nations High Commissioner for Refugees (UNHCR, 2012) and in 2013 the dramatic figures for lives lost at sea picked up again. The island of **Lampedusa** is the symbol of this phenomenon, and the numerous tragic accidents of migrants in the Mediterranean Sea (some known, others simply unknown) have turned the *mare nostrum* of the Romans into a *mare monstrum* (monster sea).⁵ Against the background of this contemporary social and human phenomenon, irregular migration policy is securitized and the external borders are framed in Member State' and

⁴ In this chapter, **border policing** and **border surveillance** are used interchangeably.

⁵ Estimates on migrants' deaths at sea are uncertain, but according to the Fortress Europe blog, run by journalist Gabriele del Grande, in the last few decades about 20,000 people have lost their lives in the attempt to cross the Mediterranean Sea from Africa to Europe.

EU's policies as the gateways, the sources of (external) threats to their (internal) security. Border surveillance in contemporary politics (in the EU, but also in the US and Australia, to make some comparisons) is increasingly seen and practiced as a preventive policy (Collett, 2011), requiring the deployment of all the most up-to-date technological means (Dijstelbloem and Meijer, 2011; Besters and Brom, 2010).

It is commonly acknowledged by scholars that the Europeanization of national migration policy is caused by national failures in the domain (Boswell and Geddes, 2011), and that the European migration policy is best explained by **securitization** theories, according to which migration and migrants are framed, in political discourses (Weaver, 1995), by security actors (Bigo, 2001) and through practices (Balzacq, 2008) as security threats. The framing of migrants as security threats has determined that Member States and the EU react to defend the internal security from those alleged external threats. So, if globalization has turned the world into a 'global village', where goods, capitals and information circulate across the globe, it could not help decreasing persistent poverty in the southern part of the globe; instead, states have consolidated their interest in regulating the human dimension of globalization, i.e., **human mobility**. This policy, aiming at controlling the overall phenomenon of human migrations also by increasingly regulating legal migration and consequently, fighting against illegal migration, has attracted a number of criticisms, captured by the image describing **Europe** as a **fortress**.

Within this process, border surveillance has gained importance too. The EU and Member States are investing in technological applications, ranging from biometrics to databases and drones, in order to deploy the most effective technological means in the attempt to face the security threats allegedly coming from outside. Drones are part of this process, variably framed as EU's digital fix (Besters and Brom, 2010), or transformation of Europe into a **high-tech fortress**, through militarization of border surveillance (Marin, 2011). **Drones**, more neutrally called **Unmanned Aerial Vehicles (UAVs)** or **Remotely Piloted Aircrafts Systems (RPAS)**, are first of all aircrafts, and secondly, Intelligence, Surveillance, (Target-Acquisition) and Reconnaissance (ISR or ISTAR) machines. As such, they can perform surveillance, monitoring and intelligence operations, usually carried out by public agencies tasked with border control functions. In the US, drones have already been used for monitoring the southern borders since 2004, and recently, some European states, such as Italy, have deployed them too (Marin, forthcoming). In the last few years, several European and international agencies have joined forces participating in EU-funded research programmes exploring and preparing the transfer of drone technology from the military domain to the non-

military one (Hayes et al. 2014). In this context, Frontex regularly holds demonstrations and workshops concerning drone technology for border surveillance, cooperating closely with the world's industry giants, and specifically with companies like Israel Aerospace Industries, Thales Group, Aerovision, or Lockheed.

Thanks to the surveillance technologies they can carry, drones can contribute to the attainment of the objectives of EU border controls, i.e., to reduce the number of migrants illegally entering the EU, to **prevent undocumented migration** and thus contribute to the fight against cross-border crime. Drones can provide information to border guards present on the ground or at sea and therefore contribute to making border surveillance a proactive policy, rather than a reactive one. These ground and sea patrols, thanks to the information acquired by drones, could then take control of migrants and, in the case of migration by sea, could support them in case of distress, taking them to the closest port, but also re-direct them to international seas or to the authorities of cooperating third countries, if bilateral agreements so provide.

The aim of this chapter is to explore the recent developments constituted by the deployment of drone technology in border surveillance. The chapter firstly introduces the actors, policies and practices in the sphere of border management, specifically in the area of border surveillance (2); then, it discusses the use of drone technology for border surveillance, looking at the potentialities but also at its current shortcomings (3); it will then move toward the regulatory framework enabling the safe deployment of drones under aviation law and on border surveillance (4) and present the constraints represented by fundamental rights and data protection rules on drone technology and the challenges drones represent for the human rights of migrants (5), before concluding that drone technology might entail a further securitization of border surveillance, together with a shift toward **preventive border surveillance** (6).

2. Border policing in the EU: actors, practices and critical aspects

2.1. Actors in border surveillance

As stated in article 77 (1) (c) of the TFEU, the EU is mandated to develop the gradual introduction of an integrated management system for external borders. Border management in the European perspective has several actors: on the one side, the Member States and their national bureaucracies, and, on the other side, the European Agency **Frontex**.

Considering the first group, i.e. the particular Member States, the countries most directly concerned by the recent migratory trends are the southern European states, like Portugal,

Spain, Italy, Malta, Cyprus and Greece: they have to administer an important maritime border neighbouring with third (i.e., non-EU) countries and they are (geographically) the first countries to be faced with the problem of irregular and dangerous migration by sea. Border surveillance practices vary across the Member States and are obviously limited by the legal framework, but to some extent are also influenced by governments' political interests and goals. Since the management of a state's borders in the EU means the management of the external borders of the EU, the policies applied in these Member States involve consequences for the rest of the EU. However, as explained above, the Schengen integration process requires Member States to be the first 'guardians' of the common external borders of all the Member States of the EU. Therefore, the individual states are still the first and most important actors in the area of border surveillance, and, according to the legal framework, they bear the responsibility of border controls within the EU.

Traditionally border surveillance is the task of border guards, the first actors on the frontline of borders. Usually European states have specific bodies within their law enforcement systems, but in this respect there are many variations as to their nature and features, as institutions are the consequence of historical processes within states. So, for example, in German-speaking countries, border surveillance is usually vested with the police, whereas in other Member States it is bestowed on military police corps such as the French *Gendarmerie*, the Dutch *Royal Marechaussee*, the Spanish *Guardia Civil*, and the Italian *Carabinieri*. Alongside them, border surveillance is traditionally also a competence of agencies tasked with the control of customs, such as the French *Douane* and the Italian *Guardia di Finanza*.

In the last few years however, a new trend has been emerging in Southern European states, i.e., the **militarisation of border surveillance** as part of a broader process of securitization of borders and migration (Bigo, 2001; Hayes, 2006). Alongside to border guards, other state agencies have been tasked with border surveillance, often as a consequence of the characterization of migration flows as a security threat and as an emergency, requiring the deployment of exceptional forces. An interesting example is provided by the operation *Mare Nostrum*, carried out by the Italian Navy, in cooperation with the Ministry of Internal Affairs. In this operation, border surveillance and the management of irregular migration were characterized as humanitarian actions, and therefore this humanitarian rationale has been used to justify the deployment of warships and other military assets. Alongside this, states are progressively deploying other assets, such as drones, but also satellites, in order to map human movements in the sea. The flourishing of a civilian security industry after the fall of the Iron Curtin and the end of the Cold War is also supported by the interests of the defence

industry, which is finding in these civilian missions a new and growing market, where dual-use technologies can be exploited and tested and their deployment can be made cost-efficient thanks to mutualisation.

Another increasingly influential actor in border management is **Frontex**, the European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union, operational since 2005. The mission of Frontex is the coordination of operations mainly carried out by single states. Its core activities are joint operations, pilot projects and risk analysis. Another crucial task of Frontex is research and development (R&D); the agency regularly organizes workshops and demonstrations of new technological developments informing the Member States on research on border management techniques and technologies (Regulation No 1168/2011, 2011). Frontex, with the help of the European Commission (EC), supports research concerning border surveillance that aims at *“improving detection of irregular migration and cross-border crime as it occurs between border crossing points (BCPs)”* (FRONTEX, 2014a) This research should also help Member States 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).⁶

However, the use of drone technology by Frontex itself raises a lot of concerns among scholars. The agency has been criticized for its lack of transparency. Many of its activities are not made public, also when the sensitivity of the contained data is not an issue (Léonard, 2010). In the past NGOs as well as scholars have shown reasons for concern on the compliance of Frontex-coordinated operations with the legal provisions on **human and migrants’ rights**. The agency has been accused of engaging in push-back operations, carried out on the basis of bilateral agreements between a Member State and a third country.⁷ In the joint operations (JOs) Hera II and Hera III, the bilateral Spain-Senegal and Spain-Mauritania

⁶ In computer sciences data mining is the 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).

⁷ 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) (FRA, 2013; Heijer, 2011). These agreements also allowed the Member State to join the national border patrols and participate in the surveillance of those third states’ territorial waters (Heijer, 2011). The criticism of these practices mainly involves the fact that these activities are actually against international refugee law, i.e. they constitute a breach to the non-refoulement principle (Marin, 2011) 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 Human Rights in the case of *Hirsi Jamaa and Others v. Italy* (Case of *Hirsi Jamaa and Others v. Italy*, 2012).

agreements enabled interception and diversion of migrants' boats (Heijer, 2011; Marin, 2014). Later on, the agency did not engage actively in push-back operations, but it claimed success and effectiveness for the JO Nautilus, carried out 'in parallel' to the operations carried out by Italy in the same area on the basis of national bilateral agreements with Libya, where interceptions also took place. This raised criticism among scholars: though not directly involved with such practices, the agency seemed to suggest complementarity of its and Member States' controversial practices (Moreno-Lax, 2014; Marin, 2014).

However, in spite of the importance it acquired in a relatively short period, it would be wrong to see Frontex as a supranational actor. On the opposite side, Member States are represented in the control body of the agency, its Management Board. The agency relies on the Member States' (mainly technical) resources and on their voluntary participation in joint operations. Hence, the agency is claimed to undergo some limitations in its cooperation capacity. In addition, it claims that **search-and-rescue operations** fall outside the mandate of border surveillance. The case of the Greek tanker *Salamis* is illustrative. The *Salamis* rescued migrants from near the Libyan coast. This tanker was not allowed access into the territorial waters of Malta, and found itself in an impasse not wanting to go back to Libya and not being allowed to enter Malta or Greece. To avoid a possible humanitarian crisis on board the tanker, the ship was allowed to disembark migrants in Italy after political negotiations, with the European Commission claiming no powers in the process (Balzan, 2013; Balzan and Dalli, 2013). Frontex was criticised for not taking action in this and similar cases; the agency claimed not to be responsible for search-and-rescue operations and that these actions lie solely in the authority of particular Member States (Regulation EU 1052/2013, 2013), in spite of the growth of the agency's competences and means. With the Frontex Regulation reforms, the agency has been allowed to deploy rapid-reaction intervention teams, and now European Border Guard Teams, to provide enhanced technical and operational assistance in case of an urgent and exceptional situation, or to purchase its own equipment.

2.2. Current instruments and practices: the challenges ahead

Frontex has a strong operational dimension that shows itself clearly on the operational-to-administration expenses ratio, which is 67:33 (Marin, 2011; FRONTEX, 2013a). However, there are some doubts about the proportionality of the allocation of these resources and its effectiveness. Most of the operations of Frontex are carried out at sea borders although migration by sea only constitutes a marginal part of overall entries to the EU and is driven by

structural factors like economic and political situation in the migrants' states of origin (Marin, 2011; Czaika and De Haas, 2013).

Integrated border management (IBM) sees cooperation with TCs as one of its pillars. For this purpose, Frontex has been given powers to coordinate action between **third countries** and the Member States (Regulation No 1168/2011, 2011). This follows the argument that for efficient and successful operations at borders against unauthorised migration and cross-border crime actions have to be coordinated between the countries of destination and countries of origin. Frontex has already signed a few working arrangements with third countries that involve development of activities between the Agency and TCs in the fields of information exchange and risk analysis, training and R&D related to border management, and development and coordination of joint operational measures and pilot projects on border control (FRONTEX, 2014d).⁸ Nevertheless, Frontex is bound by EU law, which also means its fundamental rights provisions, when cooperating with TCs. It is however questionable how clear and transparent cooperation with North African countries can be (Fink, 2012). These are the main departure points of unauthorized migration in the Mediterranean but the political and human rights situation there is becoming worse rather than better.

According to European legislation, Member States are tasked to carry out border surveillance, and Frontex coordinates their actions in this regard. But what is border surveillance? In its article 2(11), the **Schengen Borders Code** defines border surveillance 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”* (SBC, 2006). However, at the southern sea borders law enforcement authorities find several challenges: e.g., how to detect and track small boats, high personnel costs, and efficiency and surveillance capability of border patrols (FRONTEX, 2014b). Since the Mediterranean is one of the busiest seaways in the world, the core of these challenges is the problem of how to monitor this extensive area of 2.5 million square km and collect information on what is happening, also in remote places. The current technology is often perceived as insufficient: for example, weather conditions and clouds affect satellite images, pictures taken by satellites are not real-time and can only be taken when the satellite is directly overhead; secondly, the automated identification system for boats is only mandatory for commercial vessels and

⁸ Frontex has 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 (FRONTEX, 2014c).

fishing boats over 16 metres, and infra-red cameras can scan shores only up to the distance of ca. 1.2 km (FRONTEX, 2013b).

This sub-optimal situation creates a demand for more effective and efficient technological equipment to counter these challenges, such as the deployment of drone technology according to the US example. Frontex has already set a few criteria that drone technology has to satisfy for it to be regarded as the effective solution to counter the challenges concerning border surveillance. Accordingly, drone manufacturers have to prove to Frontex that it can persistently monitor large areas, function in all weather conditions, identify suspect vessels and human presence, provide real- and near-real time operational data and be integrated into existing surveillance networks, but mainly that drones are a cost-efficient alternative to manned aircraft and that can be integrated into the normal airspace (Kolev, 2012; Beugels, 2011).

However, the most debated aspect in the perspective of drone deployment by Frontex or other Member States is the actual impact of this technology on border management, the fundamental rights of migrants and privacy rights, i.e. how much the deployment of drones changes traditional border management and its legal standards. Currently, the information on the situation in the Mediterranean collected by Frontex and the Schengen countries is shared through the **European Border Surveillance System (EUROSUR)**. EUROSUR is a technological network whose aim is to sustain better border management of the EU's external borders developed by Frontex with the Member States' border authorities (European Commission, 2013b). It features several national situational pictures, a “**European Situational Picture**” (ESP), and a **common pre-frontier intelligence picture (CPIP)** on what is happening on and outside the EU borders, including information on prevention of unauthorised migration and cross-border crime. The information is gathered with the help of various technological means, e.g. satellites, ship board monitoring systems, drones, ground sensors etc. This network should enhance cooperation between national border control agencies, as well as between them and Frontex, and promote surveillance of EU external borders and therefore improve border protection and save migrants' lives (Regulation EU 1052/2013, 2013). However, although the supporters of EUROSUR claim its humanitarian potential, Frontex has no search-and-rescue competence. The operational area of the recently established **JO Triton** south of Sicily is a telling example (FRONTEX, 2014d).⁹ It is therefore questionable how EUROSUR will contribute to more safety at sea preventing loss of

⁹ According to the (then) Commissioner for Home Affairs, Ms Cecilia Malmström, JO Triton should be seen as complementary rather than alternative to *Mare Nostrum* (Nielsen, 2014).

migrants' lives in boat accidents and whether humanitarian reasons are the main objective of EUROSUR.

Having explained the current policies and practices of border surveillance, the chapter will now move on explaining the benefits of drones in border surveillance and presenting current projects in the domain.

3. The deployment of drone technology in border surveillance

Drones now appear to be the technology that can contribute to increasing effectiveness in border surveillance. According to the Special Report produced for NATO on UAVs, drones have operational advantages as they are able to lower personnel costs and are more expandable as they can stay airborne much longer than a human crew, as well as carrying the necessary technology for monitoring areas and detecting suspicious vessels, e.g. infra-red cameras, mobile phone jammers, thermal imaging devices and video cameras (Nolin, 2012). Advocates for increased border surveillance claim not only that drones will be beneficial for preventing and combating cross-border crime and irregular migration, but also that increased surveillance will fulfil a humanitarian mission (by providing information on accidents, thereby enabling S.A.R. operations) (Regulation (EU) No 1052/2013, 2013). However, drones are first of all aircrafts, supporting sophisticated sense-and-detect technology; therefore, it is out of the question that, thanks to drones, public authorities will know more about what happens at sea. But the question is: is this really the heart of the problem? Is there a need to know more precisely what happens at sea? Will the numerous calls for rescue by migrants' boats that have been left unanswered in the last few years be answered by drones?¹⁰ Or do these failures to answer calls indicate that S.A.R. duties are now hindered by controversies on the port of **disembarkation**, which also means taking responsibility for providing assistance to these persons, and also giving them **access to asylum systems**?

Actual use of drone technology in the EU for the purposes of border surveillance is still limited. Among the southern Member States, Spain and Italy dispose of drones that can be used for border surveillance. In 2010 Italy bought 12 UAVs from the US, 6 MQ-1 Predators and 6 MQ-9 Reapers or Predator Bs from the US. Since October 2013, some of them have been used within the operation *Mare Nostrum* for monitoring the high seas and searching for

¹⁰ See two emblematic cases among many, the case of the left-to-die boat, and the Salamis case of summer 2013.

migrant vessels.¹¹ However, because of the high costs involved, the Italian Government has declared its intention to discontinue the operation and to ask for the participation of European states in a new Frontex-coordinated operation (Scherer, 2014). Recently, JO Triton was started by Frontex to protect Italian sea borders from migration focussing on migratory flows from Tunisia, Libya, Egypt and Turkey, but clearly pointed out that the S.A.R. operations are the competence of the Member States (European Commission, 2014a).

Other states too are on the frontline and getting ready to deploy UAVs at their borders. Spain has also considered using drones for sea border surveillance, mainly in the Strait of Gibraltar and over the Canary Islands (Purvis, 2011). It also carried out several tests within the PERSEUS project in 2013 (Plunkett, 2013). The Spanish authorities support or are actively engaged in several projects on drones financed under the FP7 (e.g. PERSEUS, CLOSEYE, TRITON, AEROCEPTOR). However, under the current Spanish regulation the deployment of drones for civil purposes (including commercial or professional drones) is not allowed. Therefore military drones can only be used under special conditions (Howell, 2014).¹² Similarly, Greece is also in the process of purchasing a drone suitable for day and night border surveillance (Souliotis, 2014; New Europe Online, 2014; Mamakouka, 2014).

Alongside member states, the European Agency **Frontex** has also several times confirmed its interest in drones for improving the search-and-rescue and the reaction capability of the Member States and the agency; secondly, drones would contribute to providing additional information to the EUROSUR network (Laitinen, 2013). The agency regularly participates in various initiatives regarding research and development as well as organising practical demonstrations of and tests on drone technology (FRONTEX, 2014a). The former Executive Director of Frontex, Ilkka Laitinen, in an interview for EUobserver admitted that the drone “*seems to be a reliable and cost-effective means for surveillance*” (Nielsen, 2013a). The Head of R&D at Frontex, Edgar Beugels, admitted that Frontex is interested in drone-technology for border surveillance, though “*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).

¹¹ The Italian Navy has not disclosed how many drones are deployed for border surveillance. The Operation *Mare Nostrum* is an Italian border surveillance and “*humanitarian operation to save human lives*” in the Mediterranean; the assets deployed confer a clearly military nature on it (Ghelli, 2013; Day, 2013).

¹² This is not the case of Italy, which has also enacted regulation enabling drones to fly in its skies for civil purposes, thanks to resorting to “smart segregation” (ENAC, 2013).

This uncertainty about the real deployment of drones has multiple reasons. Firstly, current European aviation law does not allow drones to fly in non-segregated airspace.¹³ Therefore the preparation of an appropriate legal framework, providing guarantees on safety, should precede the actual deployment of drones. Secondly, there are significant concerns on the cost-effectiveness, efficiency, added value and technological limitations of drones for use in border surveillance, in addition to worries on the threats drones pose to fundamental rights and civil liberties (Laitinen, 2013; Nielsen, 2013b; FRONTEX, 2014b; FRONTEX, 2012a). The American experience offers in this respect a lesson that cannot be ignored. In the US several criticisms have been raised on the deployment of drone technology in border surveillance: though in the political debate there is a never-ending rush toward drone technology, in 2012 the fleet was unused for 63% of the time. This was due to a lack of budget for drone operations, and associated costs of maintenance and drone-related equipment (Sternstein, 2012). So the lesson for our policy-makers and public agencies is that clear benchmarks and criteria are necessary in order to measure the cost-effectiveness of drones. This requires measuring not only the costs of the aircrafts, but also their operations and their maintenance. Right now, research on drones is to some extent segregated, protected from the public debate on military drones, on which by contrast there is media coverage and debate on the desirability of UAVs and on the ethical implications of drones and of robotics. In a sense the civilian deployment of drones remains unquestioned, while (defence) industries and public agencies prepare, research and manufacture new drones in a **technocratic process**, where the fundamentals of the debate remain unexplored (Hayes et al. 2014).

More precisely, looking at the process itself, other considerations might arise. For example, Frontex has hosted several workshops on drone technology. In 2009 and 2010 it conducted workshops on “RPA and Land Border Surveillance” in Imatra, Finland.¹⁴ 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 aimed at presenting the performance of drones in various conditions are another type of event Frontex regularly organises. At these sessions, European and international drone manufacturers were invited to present the latest developments in their

¹³ Non-segregated airspace is airspace open to all civil air transport. Current aviation law prohibits the deployment of fully automated drones in non-segregated airspace (Hayes et al., 2014).

¹⁴ This workshop included live demonstrations of mini-RPAs (Patria MASS, Rafael Orbiter, SIM Skyeye, Selex ASIO) and Aerostats (Skystar 180) (Kolev, 2012).

industry and demonstrate their capabilities for border surveillance.¹⁵ Criticisms have been raised on the generosity of Frontex for having subsidized companies to allow them to participate in demonstrations where Member States' officials act as potential customers. For example, in 2011 Frontex paid 30,000 euro to Lockheed Martin UK Integrated Systems & Solutions for participating in a demonstration of OPV UAVs in Aktio (GR). The subsidies to the participating companies for this demonstration session varied between 10,000 and 198,000 euro (Fotiadis and Ciobanu, 2013; Hayes et al., 2014).

To conclude, the last few years have witnessed interest in and research on the **transfer of drone technology** from the military to the civil domains; in particular, Frontex and Member States' ministries have engaged in the transfer of UAV technology to border surveillance, the focus of this chapter. Considering the high number of projects on different aspects connected with the deployment of drones, together with the actual experiences of drones' deployment in border surveillance by some Member States, it can be concluded that public authorities have a long-term interest in using drone technology for the protection and policing of their external borders.

4. The legal framework for the deployment of drones outside military spheres

The deployment of drones for border surveillance in Europe triggers general and specific questions. Under general questions, we indicate those concerning the nature of drones as aircrafts, whereas the specific questions refer to drones in the sphere of border surveillance.

While a thorough examination of **aviation law** issues is outside the scope of this chapter, the following section will present the problems underlying the deployment of drones with reference to aviation standards.

4.1. General aviation law issues

As recalled above, an UAV or an RPA is, in itself, an aircraft, and as such, it has to be accommodated into the airspace, according to the current regulatory requirements, and, to some extent, postulating new regulatory frameworks.

¹⁵ Among the companies that attended the workshops in the past were 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) and Lockheed Martin (UK).

This is a preliminary set of issues that precede and, to some extent, hinder the deployment of drone technology in the civil domains, and raises questions on whether the necessary and adequate legal framework concerning the deployment of drones in the civil airspace is in place. Within this framework, drones have to meet technological standards of **airworthiness, safety and liability** in case of accidents.

However, experts admit that the EU has 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.

The EU has competence to regulate only drones above 150 kg. Under this limit, drones are subject to the 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 Member States as is already done in other areas of the internal market. However, on its plans for the introduction of drones into the European airspace the **European Commission** (EC) has consulted different stakeholders (e.g. industry, national authorities) since 2009 (European Commission, 2014b).

The **International Civil Aviation Organization** (ICAO)¹⁶ 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. Their deployment to the civil domain is also delayed in the US. However, across Europe and in the international airspace drones can currently be deployed only as far as the operator maintains a visual contact with the drone, i.e. there is **visual line-of-sight** (VLOS)¹⁷. For deployment beyond the VLOS, drones have to be operated in segregated airspace or must be equipped with a **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. Moreover, the EU law prohibits the flight of fully automated unmanned drones in commercial airspace (UK Civil Aviation Authority: Directorate of Airspace Policy, 2014; Hayes et al., 2014).

¹⁶ 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).

¹⁷ 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).

The EU plans to finish the revision of the regulation concerning airspace technology and its deployment by 2016. This revision should therefore integrate drones too into national airspace from that year. The EC has 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). However, for now it can be concluded that the European airspace is legally not yet prepared for a large-scale accommodation of drones into the civil airspace. From the perspective of aviation law, their use nowadays can therefore be assumed as a precipitate act that creates concerns about respect for an adequate legal framework ensuring airworthiness, safety and liability.

The next section will focus on problems specific to the use of drone technology for border surveillance purposes.

4.2. The legal framework for border surveillance and its constraints

As stated in article 6 of the Schengen Borders Code (SBC), border control should be fully in line with respect to human dignity, not discriminatory, and be proportionate to the objectives pursued; border surveillance, understood as part of **border control** (recital 8, SBC, 2006), must therefore also respect this requirement. Article 12 SBC stipulates that **border surveillance** serves to “prevent unauthorized border crossing, to counter-cross border criminality and to take measures against persons who have crossed the border illegally”. Furthermore, according to art. 12(4) SBC, surveillance may be “*carried out by stationary or mobile units ... the aim of such surveillance being to apprehend individuals crossing the border illegally. Surveillance may also be carried out by technical means, including electronic means.*” It is questionable whether drones can be considered as a legitimate tool for border surveillance, if we interpret them as technical means, drones being first of all aircrafts. Right away it can be stated that drone deployment pursues legitimate objectives, e.g. stopping cross-border crime, preventing unauthorised migration, saving human lives and protecting national security and order. The question is whether drones constitute the least restrictive measure that could be chosen to achieve these objectives and whether there is some imbalance between the costs of drone technology in border surveillance and its benefits.¹⁸ Moreover, the surveillance and the information acquired will have to be processed by stakeholders in risk analysis. Frontex will therefore remain one of the important players as one of its main tasks is

¹⁸ This is an applied principle of proportionality (Sauter, 2013).

conducting **risk analysis**. Hence, it is possible to argue that drone technology might entail a shift from reactive border surveillance to **proactive or preventive border surveillance**.

The use of surveillance technology, e.g. drones, at legal border crossing points¹⁹ is proportionate because states monitor their borders and people expect to be monitored there as they are highly public places (Kenk et al., 2013). Surveillance between the border crossing points can also be considered legitimate as it is perceived as responding to a need to prevent and discourage persons from circumventing border checks (art. 12(2), SBC, 2006). Nevertheless, even when border control is carried out outside the EU borders, the SBC still applies, as do the obligations to protect fundamental rights. Waiving of art. 7 SBC on border checks on persons, which according to the definition in art. 2 SBC should be carried out at border crossing points at the EU external borders, is provided for in 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 TCs (3.1.1. Annex VI, SBC, 2006). The execution of these border checks should fully respect **human dignity** and the principles of **proportionality** and **non-discrimination**, according to art. 6 SBC. Alongside EU legal obligations, EU states are bound to respect the **European Convention on Human Rights** even when they act outside the EU territory (Case of **Hirsi Jamaa and Others v. Italy**, 2012).

On the 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 core questions of search and rescue operations, i.e., who is responsible for rescuing a boat with migrants in distress²⁰ and where to **disembark** migrants.

According to international maritime law there is an obligation to render assistance to a boat in distress and it applies to all vessels, both commercial and governmental (IMO, 1985); however, the nearest place of safety remains a controversy among some states, such as Malta and Italy. According to the FRA report, this point is a cause of problems in the Mediterranean: disembarkation entails taking care of the migrants, providing them with the possibility to apply for asylum because of lack of responsibility sharing: the case of the tanker *Salamis* offers an example. Shipmasters of civil and commercial ships are also concerned

¹⁹ Border crossing point is any crossing point authorised by the competent authorities for the crossing of external borders (SBC, 2006).

²⁰ 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*” (IMO, 1985).

about their obligation to rescue migrants at sea because they have to report distress cases 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, with the consequences this entails, and face problems on where to disembark the migrants: states are usually reluctant to allow the disembarkation of unauthorised migrants in their ports. Similar problems are faced by military vessels often cruising the Mediterranean: the case of the **left-to-die boat** offers a tragic example.²¹ For commercial boats, taking part in rescue operation is very costly and dangerous as migrants might try to get onto the boat anyway. Therefore, many of them try to avoid migrants' vessels and do not report them to the authorities. The former Italian Prime Minister Enrico Letta, presenting the operation *Mare Nostrum*, 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).

Overall, it seems that drone technology will increase **surveillance**, but how the latter will increase the **security of migrants** is not yet clear. The political issues that have hindered S.A.R. operations until now are still there. Southern states denounce a lack of solidarity and burden-sharing concerning rescue operations and reception of the migrants. 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, one can conclude that **drone technology** might entail a further **securitization** of border surveillance, together with a shift toward **preventive border surveillance**.

5. The deployment of drones in border surveillance: an outlook on the limitations from and challenges for human rights

5.1. The limitations for drone surveillance from privacy and data protection

Among the main challenges implied by the deployment of drones in the Mediterranean are the **privacy and data protection rights** of all people found within the sight of the drone at sea, e.g. fishermen, tourists and migrants, since drones can collect and transmit specific

²¹ In 2011 a Spanish naval force rescued about a hundred migrants and it took five days of negotiations till those people could be disembarked in Tunisia. The FRA report found that migrants often report that they encounter a military vessel during their journey but are mostly turned away without the migrants' vessel being reported or assistance being rendered (FRA, 2013).

information to the drone operator about what happens at sea, including visual data.²² Drones, as a sense-and-detect technology, do nothing but increase the conflict between **security** and **privacy** (Marin, 2014). But which is the legal framework binding the operation of drones?

In the EU legal order, the privacy and the protection of personal data²³ have fundamental rights status. According to article 7 and article 8 of the **Charter of Fundamental Rights** of the European Union, legally binding since 2009, individuals have, respectively, the right to privacy and the right to the protection of their personal data. The latter is based on the principles of consent, the principle of specific, explicit and legitimate purpose for the collection of data, the right of access to data, and right to rectification. Case-law has interpreted the current legal framework as also including the right to the deletion of data, or right to be forgotten (Case Google Spain, 2014). Legislative reforms are introducing other rights, such as data portability and data breach notification. Besides the now fully fledged legally binding Charter of the EU, the **European Convention on Human Rights**, in its article 8, states that everyone has the right to have their private and family life, home and communications respected, similarly to article 7 of the Charter.

Alongside these provisions of a constitutional nature, enshrining data protection among the fundamental rights of the EU's legal order, there are European regulations binding in all Member States that further specify the constitutional provisions of the Charter: these are the **Data Protection Directive 95/46/EC** (hereinafter: DPD) and the **Framework Decision 2008/977/JHA** on the protection of personal data processed in the framework of police and judicial cooperation in criminal matters (hereinafter: the FD) (Directive 95/46/EC, 1995; Council Framework Decision 2008/977/JHA, 2008). Last but not least, Regulation 2001/45/EC completes this legal framework, covering the processing of personal data by [Union] institutions and bodies (Regulation No 45/2001, 2001).

The Data Protection Directive has paramount importance at the EU level. Its scope covers “the processing of personal data wholly or partly by automatic means” and by contrast does not cover “processing operations concerning public security, defence, State security (including the economic well-being of the State when the processing operation relates to State security matters) and the activities of the State in areas of criminal law” (article 3 and 13,

²² In the case of *Peck v. UK*, the ECtHR stated that: “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).

²³ According to Data Protection Directive 95/46/EC personal data are 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).

Directive 95/46/EC, 1995). The scope of the FD instead covers Member States' activities in the context of the judicial cooperation in criminal matters, the former Third Pillar of EU law, and hence extends data protection to that area, otherwise explicitly excluded from the scope of the DPD.

As mentioned before, the deployment of drone technology to civil applications challenges these legal frameworks and the rights they protect: drones can collect and transmit specific information to the drone operator about what happens at sea, including **visual data**.²⁴ It has been argued that the application of the DPD to border surveillance is not clear (Finn and Wright, 2012). Indeed, according to the DPD, Member States can restrict the scope of the obligations and rights protected by the DPD, if this is necessary in order to protect, among other things, national security, public security, and for “prevention, investigation, detection and prosecution of criminal offences (...)” (article 13, para. 1, letters a), c), d), Directive 95/46/EC, 1995). However, any limitation of EU rights has to be based on the **rule of law** and has to be applied in a **proportionate** manner. Secondly, when Member States act so, they are nevertheless bound to respect fundamental rights (Case ERT, 1991). Thirdly, considering we are also dealing with rights protected under the European Convention of Human Rights, according to that Convention, as interpreted by the Court of Strasbourg, restrictions to fundamental rights have to be based on the rule of law, and have to be necessary in order to protect public order values such as national security and public safety and prevent disorder or crime. Alongside this, Frontex being an EU agency, its operations are covered by Regulation 45/2001/EC, as well as by application measures adopted by its Management Board, as stated in Article 11 of the Frontex reformed Regulation. Therefore, even if one cannot invoke the right to privacy at the border, as the border is the legal and physical space where states exercise control to maintain their sovereignty, at the border the individual can invoke and is entitled to data protection, as an autonomous fundamental right. This European human right is defined in its fundamentals by the Data Protection Directive, currently in the process of being reformed into the General Data Protection Regulation. For this reason, the Commissie Meijers had suggested to postpone the enactment of the EUROSUR Regulation till the adoption of the General Data Protection Regulation, which has not been done (Meijers Committee, 2012).

²⁴ In the case of *Peck v. UK*, the ECtHR stated that: “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).

Given this general legal background, enshrining data protection as an autonomous fundamental right, it should not be surprising that the challenges of border surveillance for data protection were discussed during the negotiation of the **EUROSUR Regulation**, as it has been acknowledged that extensive surveillance carried out in the context of border surveillance potentially infringes upon **data protection rights**. The text as agreed through the legislative process provides for specific rules for data protection in the EUROSUR system. The most sensitive issue concerns **cooperation of Frontex with Third Country Authorities** (TCA) in the framework of border surveillance. For this reason, “[a]ny exchange of personal data in the European situational picture and the common pre-frontier intelligence picture should constitute an exception. It should be conducted on the basis of existing national and Union law and should respect their specific data protection requirements.” The European Regulation (No 45/2001) on data protection is applicable, in case more specific provisions do not apply (Recital 13, Regulation No. 1052/2013, 2013). It is here stressed that the first aim of EUROSUR is not to exchange personal data; if this happens in the European situational picture or in the common pre-frontier intelligence picture, it is limited to personal data concerning ship identification numbers. When the national situational picture is used for processing of personal data, those data shall be processed in accordance with the European DPD and the FD, and important national provisions on data protection. All in all, Recital 13 and article 13 of the EUROSUR Regulation anchor the processing of personal data to the European regulation on data protection. Other provisions of the EUROSUR Regulation stress the duty to comply with fundamental rights, and with data protection requirements (art. 2(4) and art. 18, Regulation No (EU) No 1052/2013, 2013).

However, a serious challenge to data protection comes from the **cooperation of Member States with neighbouring TC**. Article 20 provides that “[a]ny exchange of personal data with third countries 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 important national provisions on data protection”.²⁵ Though strictly limited, exchange of personal data is still possible, and this inevitably triggers the question of the fate of those data, once in the hands of TC institutions. The threat of **function creep** is there. As presented above, the DPD, in its

²⁵ Article 20, para. 4. See also para. 5, stating that: “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.”

article 6, paragraph 1, 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, if within the EUROSUR system the exchange of data across national authorities (border management, law enforcement, etc.) is enabled, the question of the effectiveness of the data protection provisions remains: how can the institutions and the states monitor the respect of data provisions, after they have exchanged data with, e.g., Libyan authorities?

Another challenge for privacy and perhaps other more fundamental rights, such as the right to life, is represented by extended **surveillance** itself, and its implications. We will not develop here the answers to the question on the policy shift(s) enabled by the deployment of drone technology for border surveillance, which seem to go in the direction of **externalization of border surveillance**, and not in the direction of humanitarian operations; however, the surveillance of specific areas, outside the EU borders, will probably deter (migrants’) vessels from using a specific route and perhaps, use another, more dangerous, route. Drones are 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 fly in an unnoticed and unheard manner, and they are also valuable because of these features/properties. Therefore, should people entering a shadowed area generally be notified that they are entering a surveillance area (according to article 18 of the DPD)? This is the case already in our cities, when we enter a CCTV (closed-circuit television camera) area. Of course, in practice this cannot be done at sea. All, in all, even if the EUROSUR Regulation embeds border surveillance within the data protection framework, one should be aware that large-scale surveillance in the Mediterranean can also cause a “**chilling-effect**”²⁶ or self-disciplining effect or even erode the society’s expectation of privacy, therefore leading to normalization of previously unacceptable levels of surveillance (Finn and Wright, 2012).

5.2. The challenges for human rights created by EU’s cooperation with third countries in the area of border management

²⁶ 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 and Wild, 2010).

Under the concept of integrated border management, great emphasis is attributed to cooperation with third countries. In the aftermath of the **Lampedusa tragedy** of 3 October 2013, where more than 350 persons died close to the Italian island, the EU set up the **Mediterranean Task-Force**, in order to boost a strategy for facing the migratory phenomenon (European Commission, 2013a). As one can read in the latter report, cooperation with third countries is of crucial importance.

In order to more effectively combat unauthorised migration and cross-border crime, Frontex cooperates with TCs on the basis of working arrangements, on information exchange, risk analysis, training, research and development, joint operations and pilot projects (art. 13, Regulation No 1168/2011, 2011). Currently, 18 working arrangements have been signed with TCs' authorities.²⁷ Namely, cooperation with TCs in migration and surveillance raises many concerns because of the poor safeguards for **democratic standards and human rights**.

This section will assess how border surveillance carried out with drones can challenge **civil liberties and fundamental rights of migrants**, with special reference to the cooperation of European and TCs' border surveillance agencies.

First of all, it is questionable that border surveillance, as defined in the SBC, can include the situation of surveillance behind the external border as it is envisaged by the development of the common pre-frontier intelligence picture with EUROSUR: hence, there seems to be a gap between law and policy objectives. The **extra-territorialisation of surveillance** also entails surveillance of territorial waters of TCs: this is a sensitive issue as it touches upon the territorial sovereignty of those states. States increasingly turn to border surveillance in order to deter new departures of migrants from North African coasts and to identify, intercept and send back the boats before they reach European territory (Carling and Hernández-Carretero, 2011). Aware of the limits that the **Hirsi judgment** has placed on their extra-territorial action, European states increasingly seek the cooperation of North African countries. This raises concerns as many North African states do not sufficiently protect **fundamental rights** and as long as the people, mainly refugees, find themselves on their territory, neither Member States nor Frontex can prevent the violation of their rights.

Studies indicate how precarious political rights and civil liberties are in those states (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.

²⁷ Among those states we can name Turkey as a departure country of unauthorised migration and cross-border crime in the Mediterranean. Furthermore, Frontex is also planning to expand its cooperation with other North African countries like Libya, Morocco, Egypt, Tunisia as well as Mauritania and Senegal, which have been involved in the Hera operation on the basis of bilateral agreements with Spain (FRONTEX, 2014c).

Moreover, neither the European Convention nor the EU Charter and the Data Protection Directive are legally binding outside Europe as long as a non-EU state's authority has full and effective control over a person.

An investigation on cross-border crime needs to cover all aspects of the organization network, involving the countries of both origin and destination. States contracting the ECHR have the obligation to cooperate effectively with other countries to investigate events of cross-border trafficking, even if that event happens outside their territory (Case of Rantsev v Cyprus and Russia, 2010). However, the same cannot be said for countries which are not contracting the ECHR. European states have the obligation to protect individuals against slavery and inhuman treatment like human trafficking, according to art. 4 of the ECHR. Although there are not sufficient protections for human rights and civil liberties in North African countries, Frontex still sees them as partners in issues of combating unauthorised migration and cross-border crime.

While Frontex does not have any working arrangement with the African countries referred to (except Turkey), there is however cooperation on the basis of **bilateral agreements** between the Member States and the TCs. Member States can cooperate with TCs even without the involvement of the agency (art. 16(3) SBC, 2006). As to surveillance, Member State can incorporate the information gained from cooperation with TCs into its national situational picture in **EUROSUR** (art. 9(2h) Regulation No 1052/2013, 2013) and exchange the information with TCs according to art. 20 of this Regulation. Aware of the risks nested in cooperation with TCs, the Meijers Committee suggested that these bilateral agreements should be disclosed to the European Commission (Meijers Committee, 2012); the final text of the EUROSUR Regulation provides an obligation of Member States simply to just notify any such agreement to the Commission (art. 20(2) Regulation No. 1052/2013, 2013) to ensure that the important provisions of the agreement comply with the EUROSUR Regulation. The Regulation does not require the Commission to assess compliance with other European and international legal provisions, including those on fundamental rights, but can we deem that the Commission is not bound to do so by the Treaties? From the provisions of article 20 of the EUROSUR Regulation it is not clear what actually happens when the Commission denies that the agreement complies with the provisions of the EUROSUR Regulation or makes any recommendation to the Member State to change some provisions of the agreement. It can therefore be assumed that the Commission only has political influence powers on the agreements between Member States and TCs. Will the Commission start an enforcement action against a state, for breach of the EU's fundamental human rights?

Although these agreements must comply with European and international provisions on human rights (art. 20(3) Regulation No 1052/2013, 2013) there is no systematic process of examination of whether the agreements really comply with those provisions. Further, the secrecy of some agreements is an additional issue; the lack of **transparency** this entails undermines the principle of democratic **accountability** with the danger of possibly harming migrants' rights: the Hirsi case concerning an agreement between Italy and Libya that was not made public affords an example.

For effective cooperation with other countries, it is necessary to **exchange** important 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. As discussed above (section 5.1.), 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 mainly concerns persons who are not refugees or asylum applicants or who are not at risk of being tortured, subjected to inhuman and degrading treatment or punishment in that TC. Alongside this, the **Data Protection Directive** also 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, Directive 95/46/EC, 1995). Personal information exchange via EUROSUR also has to comply with those provisions (art. 20(4) Regulation No 1052/2013, 2013). Nevertheless, the Regulation 1052/2013 establishing EUROSUR (EUROSUR Regulation) provides an open-ended list of datasets and agencies that can be included in the information network (Hayes and Vermeulen, 2012) and although the Regulation states that exchange of personal information should be limited to the extent that is absolutely necessary (art. 20(4)), it is nowhere clearly defined in what situations this absolute necessity arises. This, combined with the unsound legal system of TCs and the sanctions imposed by them for irregularly leaving the country, causes serious concerns on the consequences and effects of **externalizing border controls** to third countries for **fundamental rights of migrants**. 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 of their migratory and personal status. Moreover, neither the Member States nor Frontex can effectively control what is happening with that data nor for what it is used after the data is transmitted to TCs. This can jeopardise the civil liberties and fundamental rights of migrants as people can be identified on the basis of provided data and thereby face risks of being tortured, imprisoned, etc. (Kenk et al., 2013). Drones deployed outside EU borders

could therefore have considerable impacts on asylum seekers because of threats to their lives 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 regarding 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, drone surveillance would inhibit their right to emigrate and, if they are intercepted before they reach Europe, they can be subjected to considerable threats of being imprisoned or fined for irregularly leaving the country. To sum up, surveillance beyond the external borders of the EU (mainly in the territorial waters of TCs) complemented by cooperation with North African TCs is a threat to the fundamental rights of migrants, does not guarantee that Member States will improve their search and rescue capacities, and is not proportionate to the risk these people represent to security for the state, whereas these measures do not improve the security of migrants' lives.

6. Concluding observations

This chapter has dealt with border surveillance in the EU, focussing especially on its most sensitive field, i.e., the Southern European border, i.e. the Mediterranean Sea. After an introduction presenting the problem and the theoretical framework, it has presented the actors involved, at both the single state and the European level, and discussed border surveillance and its latest developments, namely the deployment of drone technology and the construction of a surveillance infrastructure connecting Member States' surveillance systems, EUROSUR. In spite of increased **surveillance**, a consequence of the security-oriented approach taken by Europe, several critical issues remain: for example, the death toll of migrants in the Mediterranean is still very high, and, secondly, controversies remain among Southern Member States on S.A.R. obligations.

Within this framework, the last few years have witnessed research on and investments in the direction of the deployment of **drone technology** in border surveillance. Frontex has shown interest in drones and participated actively in their development through research projects; some states, such as Italy, have already deployed them, for example in the operation *Mare Nostrum*. At the same time, limitations exist as to the cost-effectiveness of this technology, and the American experience should also be studied in Europe, in order to avoid copying the mistakes too. Alongside this, there is little information and transparency on the costs of the deployment of this technology and the whole process is technocratic, rather than democratic.

The chapter has shown that the deployment of drones raises several issues, first, as a fact in itself and, secondly, for its impact on border surveillance. Regarding the first aspect, the chapter stresses the importance of an adequate aviation legal framework being in place, before the deployment of drones in the civil airspace; the regulatory framework should aim at guaranteeing safety in the accommodation of these aircrafts into the airspace. Alongside this, using drones in border surveillance also means moving the borders of Europe outwards, in the direction of TCs; hence **border surveillance** acquires a **preventive** character, and postulates the cooperation of TCs. In this perspective, drone technology becomes crucial for triggering a policy change, toward the **externalization of border surveillance**.

Assessing the impact of surveillance by drones on fundamental rights, the chapter has demonstrated that drones can be very invasive for individuals' privacy; however, the EU and the Member States are bound to a strict legal framework for data protection, which also applies in the context of border surveillance. Though **EUROSUR's** primary aim is not collecting personal data, EUROSUR provides for a common pre-frontier intelligence picture to be fed with information received by TCs, which is a problematic issue, in light of the level of rule of law and protection of rights of migrants in those states. Once the data are transmitted to the third countries, there is a risk of **function creep** that can hardly be controlled from Europe. So, even if constrained by fundamental rights provisions on data protection, increased surveillance of borders, and the possibilities for cooperation with third country authorities, challenge the safeguards provided by the European legislations.

The chapter therefore suggests that, while the deployment of drones for civilian purposes, such as border surveillance, seems to be one of these innovations that cannot be stopped, it is necessary to monitor the effects and the implications of the use of drones in many public policies.

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