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RAAdars for loNG distance maritime surveillancE and Search and Rescue operations

THE LEGAL FRAMEWORK OF MARITIME SURVEILLANCE

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Executive Summary

Maritime border control is one of the European maritime domains to implement integrated maritime policy and European Union Maritime Security Strategy (MSS). According to EU Regulation (EU) No 656/2014 maritime border control is not limited to the detection of attempts at unauthorized border crossings within maritime border surveillance but equally extends to the arrangements intended to address situations such as Search and Rescue (SAR) that may arise during border surveillance operations. Hence, this report studies legal framework for maritime surveillance both in border control and SAR operations when they have been done in the context of operational cooperation coordinated by Frontex.

As regards surveillance activities, in summary, a coastal State has the exclusive right to undertake monitoring and surveillance within its territory including its territorial sea which, pursuant to the United Nations Convention on the Law of the Sea (UNCLOS), may extend up to 12 nautical miles (NM) from the ‘baseline’ (usually the low water mark). A coastal State also has the exclusive right to undertake monitoring and surveillance in connection with the economic exploitation and exploration of its Exclusive Economic Zone (EEZ) which may extend up to 200 NM from the baseline. Furthermore, all States have the implied right to undertake monitoring and surveillance in the high seas, but not to the extent of interfering with the exercise of the freedom of the high seas by ships flying a foreign flag. Finally, mention can also be made of SAR regions which have a purely functional purpose and do not have any impact on maritime zones claimed pursuant to UNCLOS.

Therefore, it seems evident that there are no legal objection to carry out data surveillance even with Over-The-Horizon (OTH) radars. Potential legal restrictions may arise from processing of surveillance data. The confidentiality of certain data can be a potential barrier to its exchange. Confidentiality can originate: (a) by law due to the inclusion of express legal provisions to this effect; (b) or on the basis of contractual provisions. A number of the legal instruments cited in this report contain examples of confidentiality provisions. Another potential restriction on data sharing may arise if the data involves ‘personal data’, in which case data protection laws will apply. The most important legal issues seem to relate to confidentiality of personal data. In addition, data (security) policies may prohibit or restrict the sharing (or further use) of certain data. As regards confidentiality, the basic obstacle is the explicit nature of the confidentiality provisions in some of the key instruments relevant to monitoring and maritime surveillance. As a consequence, the processing of these data will be affected by the duty of confidentiality and professional secrecy of the persons authorized to have access to the data. Finally, the processing of personal data, e.g. for State security and criminal law enforcement, currently remains outside of the general legal framework for data protection. In any case, the new legislation on data protection aims to improve privacy and data protection. Due to RANGER radar surveillance system may include personal data, a number of specific safeguards need to be put in place in order to ensure that the basic principles of data protection law can be complied in the future, too.

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1. Introduction

This report has been drawn up as part of RANGER (Radars for long distance surveillance and search and rescue operations) project. The purpose of this report is to illustrate legal framework for maritime surveillance. The legal realm for maritime surveillance and radars are affected by:

- international law
- treaty law
- the law of the sea
- maritime security law
- public law
- humanitarian law
- human rights law
- customary law
- case law
- soft law

Hence, it is noteworthy that there are many overlapping regimes and legal orders for maritime surveillance as follows:

- international, supranational (EU) and national law
- multiple actors and agencies with varying law enforcement powers
- multiple maritime domains and policies

It seems evident that legal framework for maritime surveillance can be described in terms of complexity. This report will discuss the legal framework to extend relevant to RANGER project. Due to RANGER's special focus is in maritime border security, this report will study maritime surveillance in the context of European external border control.

The structure of the document is as follows:

- Section 2 presents legal framework for maritime surveillance
- Section 3 presents maritime zones.
- Section 4 describes EU law regulating management of EU external borders.
- Section 5 introduces legal instruments dealing with transnational threat of irregular migration.
- Section 6 describes the most important rules of protection of fundamental rights in the context of maritime border surveillance.
- Section 7 introduces different reporting regimes, data sharing mechanisms and data protection regulations.
- Section 8 illustrates some technical provisions for radars.
- Section 9 presents the most important findings in Conclusions.

2. Legal Framework for Maritime Surveillance

2.1. Different Legal Regimes

The legal realm for maritime surveillance can be described in terms of complexity of multilayer systems, where national, European and international legislation and administration are intertwined. Hence development and use of marine radars are affected by:¹

- international law
- treaty law
- the law of the sea
- maritime security law
- public law
- humanitarian law
- human rights law
- customary law
- case law
- soft law

In the field of maritime affairs, the European Union (EU) is currently seizing opportunities to become more actively involved with border control. Maritime border surveillance has long been a matter where international, European and domestic regulations are interwoven, and – as the case may be – combined with executive measures by governmental entities at different levels.

As the EU intensifies and streamlines its regulation in this area, it increasingly faces multilayer phenomena where EU's acts within international law raise highly complex issues. This report and this section are not intended to deal with the complexity of overlapping jurisdictions, but to briefly outline the key principles of international law and EU law to be taken into account when examining substantive law on maritime surveillance.

2.1.1 International Maritime Law

The global framework for the exercise of jurisdiction over maritime issues - e.g. maritime traffic, security at sea and the protection of the marine environment - is provided by the United Nations Convention on the Law of the Sea (UNCLOS). As a framework convention, UNCLOS sets out general principles and duties, whereas the enactment of detailed rules for maritime safety and their implementation are left to other international and national bodies. UNCLOS tries to strike a balance between the freedom of the high seas, especially the freedom of navigation (Art. 87 para. 1 (a) UNCLOS), and the protection of the marine environment and maritime safety.

In addition to the United Nations, the International Maritime Organization (IMO) creates operative regulations for the safety of shipping and the prevention of marine pollution. The 1974 International Convention for the Safety of Life at Sea (SOLAS) in its successive forms is the most important of all international treaties addressing the safety of navigation and technical minimum standards for the construction, equipment and operation of ships. Besides conventions, the IMO relies essentially on non-binding instruments such as guidelines and recommendations.

¹ The boundaries between different jurisdictions are by no means strict. For example, according to Kraska & Pedrozo (2013, 2) “[m]aritime security law is a hybrid sub-discipline of international law, combining principally elements of the international law of the sea, international criminal law, international human rights law, and the law of naval warfare, which is a subset of international humanitarian law. Maritime security law also involves aspects of national and international administrative regulation of immigration, trade and customs.”

2.1.2 EU Law

The EU provides the second layer of regulation covering maritime surveillance. It remains to be seen how the EU can justify its legislative competence. Primary community law appears to lack an explicit foundation. Moreover, the EU is not a flag State that could claim to exercise control over ships that classify the “EU fleet”: up till now, ships fly the flags of individual EU Member States. On the other hand, EU Member States have transferred their genuine right to legislate to the EU with respect to various maritime matters.

In this context, the EU’s competences are based upon Art. 80 para. 2 EC Treaty which provides that “[t]he Council may, acting by a qualified majority, decide whether, to what extent and by what procedure appropriate provisions may be laid down for sea and air transport”. The EU has drawn on this provision as a blanket clause for the regulation of a vast array of matters related to maritime navigation. For years, it has used the article as a foundation for EU legislation on issues such as the cooperation with international institutions in the field of maritime navigation or the improvement of safety at sea. This has been widely accepted among EU Member States and legal scholars. (Reuß & Pichon 2007, 125-126).

What is the role of UNCLOS and IMO Law for the EU? While UNCLOS cannot change the division of competences between the EU and its Member States which is enshrined in primary community law, it nevertheless provides a framework for the EU’s legislative activities in the area of marine safety. The EU is a fully-fledged member of UNCLOS, having formally acceded to it in 1998. By its accession, the EU has pledged to abide by this global framework for maritime traffic, security at sea, and the protection of the marine environment. According to Art. 300 (7) EC Treaty, UNCLOS has become “binding on the institutions of the Community and on Member States”. As a consequence, the European Court of Justice can declare null and void secondary European maritime law which contradicts UNCLOS. On the other hand, the EU is neither a signatory of the convention establishing the IMO nor has it ratified any other IMO instruments. Therefore EU organs are not bound by the latter on the basis of Art. 300 (7) EC Treaty. However, a binding effect can possibly be derived from Art. 307 EC Treaty. This is certainly the case as far as all or at least the predominant part of the EU Member States are legally bound by the respective IMO instruments, and the EU’s legislative action would generate a collision of duties for these States that they could not resolve without violating international law. Thus, only under these circumstances can the EU be indirectly bound by IMO instruments. Yet, even in this case the EU’s legislative competences are still to be derived from primary community law, not from IMO instruments. As a concluding remark one should note that UNCLOS and IMO can only put additional legal constraints on the EU’s (legislative) activities, but there is no way that they would transfer to the EU additional rights against its Member States. (Reuß & Pichon 2007, 126-127).

2.2 Guiding Principles

Bringing together European and international law in the multilayer regulation of maritime domains is a complicated issue. In general, States may exercise their jurisdiction as far as a genuine link exists between the regulating State and the regulated matter. In the absence of such a link, a State may only exercise its jurisdiction affecting another State as far as the latter consents. While examining the extraterritorial aspects of state “intervention”, one should recall that international law expects States to apply prudence and self-restraint in case of conflicting claims to exercise their respective jurisdictions, to limit themselves to instances where exercise is reasonable, and to defer to another State if that State’s interest is clearly greater. Since international maritime law does not contain any explicit authorization for the unilateral implementation of its objectives, the EU needs to comply with the general requirement of a genuine link.²

² Reuß & Pichon (2007, 132) have noted that it is doubtful whether EU could derive any entitlements from IMO law since it is neither an IMO Member State nor explicitly addressed in IMO law.

In the following sub-sections 2.2.1 – 2.2.4 four internationally recognized principles are introduced which may serve as a connecting link between the regulating State and the regulated matter.

2.2.1 Territorial Principle

As a general rule, the territory can provide a genuine link between a regulator and a regulated matter. Within its own territory, a State can regulate the conduct of all physically present natural and legal persons, regardless of their nationality. The territorial principle also justifies the exercise of jurisdiction in cases in which a conduct outside a State's territory has or is intended to have a substantial effect within. As far as the exercise of jurisdiction is based upon such effects, a State should only claim jurisdiction if the presumed effect is *direct, foreseeable* and *substantial*³. For the present context, the territorial principle needs to be seen in the light of Article 2 of UNCLOS which extends the territorial sovereignty of coastal States, subject to UNCLOS and other rules of international law, to an adjacent belt of sea, described as the territorial sea. Furthermore, pursuant to Article 56 UNCLOS bestows upon coastal States within their respective exclusive economic zones, among others, “sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the sea-bed and of the sea-bed and its subsoil.

2.2.2 Nationality Principle

Nationality constitutes a further, equally established genuine link with the potential to provide sufficient connection between the regulation and the regulated matter. The exercise of jurisdiction on the basis of the nationality principle extends to ships flying the flag of the respective state. Article 91 of UNCLOS provides that States may define the conditions for the grant of nationality to ships and requires a genuine link between the respective States and ships. As the jurisdiction over nationals refers equally to legal persons, the determination of their nationality is of utmost relevance. As a general rule, national law brings legal persons into existence and thus establishes their nationality. On the other hand, the jurisdiction over legal persons is only uncontroversial as far as they are incorporated under the laws of a certain State, their shareholders are (predominantly) nationals of that State, and the principal place of management and control is situated within that State. Conversely, there is no conclusive agreement on the question which of the named criteria create by themselves a sufficient link between a legal person and a certain State. In actual State practice, the State in which a legal person's effective seat is located and the state in which the legal person is legally incorporated are both acknowledged as States bestowing nationality upon legal persons, although this may obviously lead to conflicts and does not exclude the acceptance of further genuine links between legal persons and specific States bestowing nationality upon them. Once a legal person's nationality is determined, numerous details regarding the extension of jurisdiction to their foreign subsidiary companies remain controversial. Concerns have been voiced that, with a view to the legitimate exercise of jurisdiction, foreign subsidiary companies cannot be considered as having the nationality of their parent entities.

2.2.3 Protective Principle

According to protective principle – another foundation than can establish a sufficient link between governmental regulation and regulated matters – a State can exercise its jurisdiction even over foreigners and beyond its territory if thereby defending security or other public interests. This principle acknowledges the need of States to protect their own governmental functions. However, not every State interest is sufficient to warrant the reference to this principle. Interests of equal weight to national security is required.

³ This is called *triple test* required by international law.

2.2.4 Universality Principle

In general, the universality principle allows States to exercise jurisdiction for the defence of legal values that the international community considers to be particularly worthy of protection. Such values can result from the identification on *international community interests*,⁴ which are public goods so fundamental in nature that they are immediate concern to all States.

⁴ The terminology has not yet been established. Terms in use are “common interests”, “global commons”, “common concerns of mankind”, “common heritage of mankind”, and others.

3. Maritime Zones

This section introduces different maritime zones based on United Nation Convention on the Law of the Sea (UNCLOS). Hence, reference in this section is made to UNCLOS if not stated otherwise.

The Convention divides the seas into *maritime zones*⁵ – internal waters, archipelagic waters, territorial seas, contiguous zones, exclusive economic zones (EEZ), continental shelves, high seas, and the Area – and establishes functional rights, obligations and jurisdiction over each zone related to navigation and overflight of the oceans, exploration, exploitation and conservation of ocean-based living and non-living resources, protection of the marine environment, and marine scientific research. Coastal State rights and jurisdiction in offshore areas diminish at the distance from the shoreline increases. Conversely, the rights and freedoms of the international community increase farther from land.

It is noteworthy that UNCLOS attempts to balance the differing interests of coastal and maritime states. Coastal states seek to assert increasing control over their maritime zones while maritime states prioritize the freedom of navigation. (Geng 2012, 22).

Figures 1 and 2 in page 12 illustrate legal regimes of oceans and airspace as well as UNCLOS maritime zones related to them.

3.1 Baseline and Internal Waters

All maritime zones are measured from the *baseline*. According to Article 5 (UNCLOS) the normal baseline is the low-water line along the coast as marked on large-scale charts officially recognized by the coastal State.

Internal waters are defined in Article 8 of UNCLOS as all waters landward of the baseline along the coast. Lakes, rivers, some bays, roadsteads, harbors, canals, and lagoons are examples of internal waters, which lie landward of the baseline. Coastal States exercise the same jurisdiction and control over their internal waters and superjacent airspace as they do over their land territory. Because ports and harbors are located landward of the baseline, entering a port ordinarily involves the consent of the port State and navigation through internal waters. There is no right of innocent passage by foreign vessels in internal waters. Only in case of emergency when a ship or aircraft is in distress, it may enter internal waters without the permission of the coastal State.

3.2 The Territorial Sea

Territorial sea is measured along the low water mark running along the entire coast. Under Part II of UNCLOS, all States may claim a 12 nautical mile (NM) territorial sea. Within the territorial sea, the coastal State exercises complete sovereignty over the water column, the seabed and subsoil, and the airspace above the territorial sea, subject to the right of innocent passage, transit passage, and archipelagic sea lines passage. It is worth of mentioning that all ships, including warship, enjoy the right of innocent passage through the territorial seas of coastal States.

⁵ *Straits* used for international navigation consist of overlapping territorial seas that connect one area of the high seas or exclusive economic zone (EEZ) to another area of the high seas or EEZ. Passage through international straits is governed by part III of UNCLOS, which applies *distinct legal regimes* depending on the characteristics of straits used for international navigation. Pursuant to UNCLOS there are six types of international straits. As a general rule, all ships and aircraft enjoy a right of unimpeded transit passage through such straits in the “normal mode of operation” (UNCLOS, Articles 37-39). Strait regimes will not be discussed in this report.

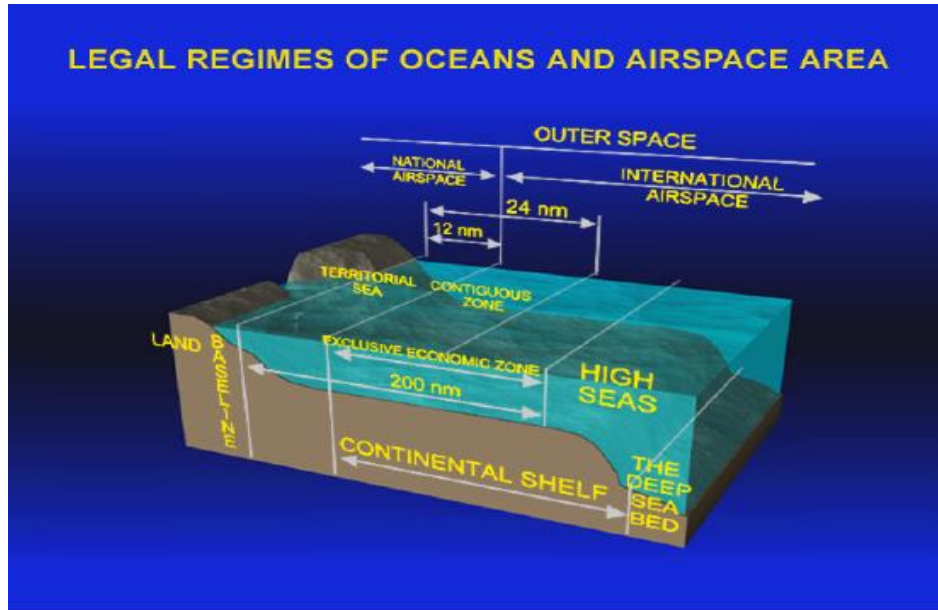


Figure 1: Legal Regimes of Oceans and Airspace Area

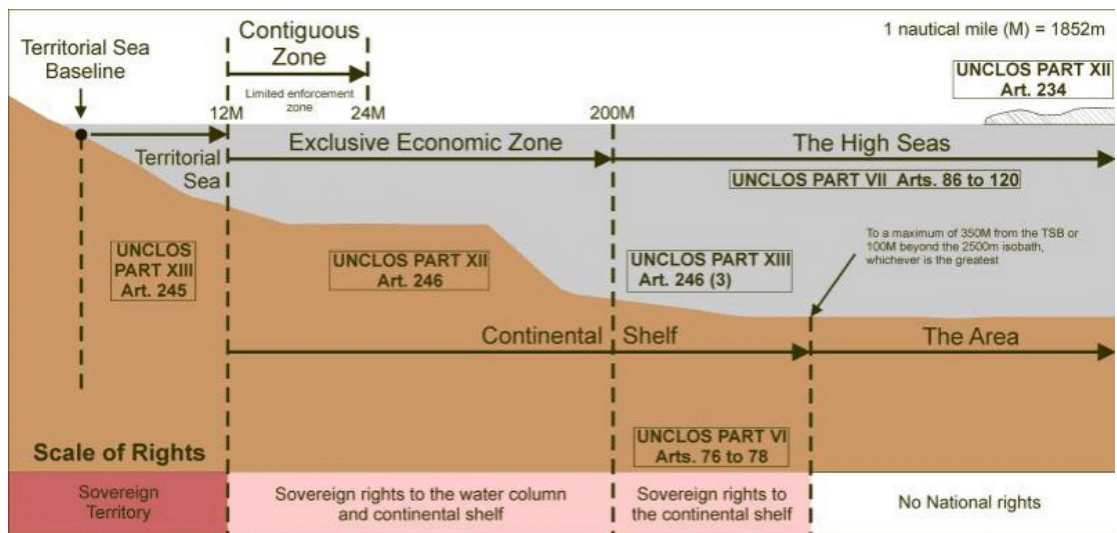


Figure 2: UNCLOS Maritime Zones

3.3 The Contiguous Zone

A single article in UNCLOS deals with a zone contiguous to the territorial sea, known as the *contiguous zone*. Article 33 of UNCLOS authorizes the coastal State to claim a 24 NM contiguous zone in which the coastal State may exercise limited control necessary to prevent or punish infringement of its customs, fiscal, immigration, or sanitary laws and regulations in its territory or territorial sea. The objective of contiguous zone is different than either the territorial sea or exclusive economic zone (EEZ). The contiguous zone is not part of the territorial sea, and it is not subject to coastal State sovereignty. Vessels and aircraft of all States enjoy the same high seas freedom of navigation and overflight and other internationally lawful uses of the seas associated with those freedoms in the contiguous zone that apply in the EEZ and on the high seas.

3.4 The Exclusive Economic Zone (EEZ)

UNCLOS created the exclusive economic zone (EEZ), a new coastal state zone cut from the high seas. Within this 200 NM zone, the coastal State enjoys sovereign rights for the purpose of “exploring, exploiting, conserving and managing” living and non-living natural resources, as well as jurisdiction over most off-shore installations and structures, marine scientific research, and the protection and preservation of the marine environment. Other activities related to the economic exploitation and exploration of the zone, such as the production of energy from water, currents and winds, also fall under control of the coastal State.

Coastal States do not, however, exercise sovereignty over the EEZ. The term “sovereign rights” in Article 56 was deliberately chosen to clearly distinguish between coastal State resource rights and other limited jurisdiction in the EEZ, and coastal State authority in the territorial sea, where coastal States enjoy a much broader and more comprehensive right of “sovereignty”.

Accordingly, pursuant to Article 58.1, in the EEZ, all States enjoy high seas freedoms of navigation and overflight, laying of submarine cables and pipelines, and other internationally lawful uses of the seas related to those freedoms, such as those associated with the operation of ships, aircraft and submarine cables and pipelines, and which are compatible with the other provisions of the Convention.

3.5 The Continental Shelf

Article 76 defines the *continental shelf* as “the seabed and subsoil of the submarine areas that extend beyond the territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin”, or to a distance of 200 NM from the baselines where the outer edge of the continental margin does not extend up to that distance. Coastal States also exercise sovereign rights over their continental shelf for the purpose of exploring and exploiting its natural resources, including “mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species.

3.6 The High Seas

Beyond the 200 nautical miles EEZ lies the *high seas*, which remain open to all States. According to Article 89 “No State may validly purport to subject any part of the high seas to its sovereignty.” Freedom of the high seas includes:

- freedom of navigation and overflight;
- freedom to lay submarine cables and pipelines;
- freedom to construct artificial islands and other installations;
- freedom of fishing;
- freedom of scientific research; and
- other internationally lawful uses of the sea.

4. Management of External Borders

This section describes European Law managing external borders of the EU. The most important legal instruments are as follows:⁶

- Schengen Borders Code (SBC);
- Frontex Regulation;
- EUROSUR Regulation;
- Regulation on Surveillance of External Sea Borders.

Each sub-section presents one of the above mentioned EU Regulations. Legal framework will be discussed only to extend relevant to RANGER project focusing on:

- border control;
- risk analysis;
- maritime surveillance;
- search and rescue;
- data management;
- information exchange.

4.1 Schengen Borders Code (SBC)

Schengen Borders Code (Regulation (EU) No 2016/399)⁷ establishes the rules governing movement and border control of persons crossing the borders. Pursuant to Article 3 the Regulation shall apply to any person crossing the internal or external borders of Member States. SBC establishes the conditions for entry as well as the relevant procedures for crossing of borders.

Article 2 defines the most relevant concepts of SBC. According to Article 2.10 *border control* means “the activity carried out at a border, in accordance with and for the purposes of this Regulation, in response exclusively to an intention to cross or the act of crossing that border, regardless of any other consideration, consisting of border checks and border surveillance”. Respectively *border surveillance* means “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 (Article 2.12).

Article 5 stipulates crossing of external borders. As a general rule, and pursuant to Article 5.1, crossing of external borders is only allowed at border crossing points and during the fixed opening hours. Exceptions for that general rule may be allowed only in situations regulated in Article 5.2 as follows:

- (a) for individuals or groups of persons, where there is a requirement of a special nature for the occasional crossing of external borders outside border crossing points or outside fixed

⁶ The names of the acts described below are *unofficial*, and they tend to give only rough descriptions of the content of the acts. The official names of the acts are indicated within each subsection.

⁷ Regulation (EU) No 2016/399 of the European Parliament and of the Council of 9 March 2016 on a Union Code on the rules governing the movement of persons across borders (Schengen Borders Code). Regulation repealed preceding Regulation (EC) No 562/2006 of the European Parliament and of the Council of 15 March 2006 establishing a Community Code on the rules governing the movement of persons across borders (Schengen Borders Code). On 7th March 2017 Council adopted Regulation (EU) No 2017/458 amending SBC to reinforce checks against relevant databases at the external borders. The amendment obliges Member States to carry out **systematic checks against relevant databases on all persons, including those enjoying the right of free movement** under EU law (i.e. EU citizens and members of their families who are not EU citizens) when they cross the external borders. This obligation shall apply at **all external borders** (air, sea and land borders), **both at entry and exit**.

opening hours, provided that they are in possession of the permits required by national law and that there is no conflict with the interests of public policy and the internal security of the Member States. Member States may make specific arrangements in bilateral agreements. General exceptions provided for by national law and bilateral agreements shall be notified to the Commission pursuant to Article 39;

- (b) for individuals or groups of persons in the event of an unforeseen emergency situation;
- (c) in accordance with the specific rules set out in Articles 19 and 20 in conjunction with Annexes VI and VII.

Article 8 stipulates rules on border checks on persons. Both Regulations - (EC) No 562/2006 and (EU) No 2016/399 - established different procedures for persons enjoying the right of free movement under Union law (*minimum check*) and third-country nationals (*thorough check*). Council Regulation (EU) No 2017/458 gives up these concepts. Furthermore, it obliges Member States to carry out **systematic checks against relevant databases⁸ on all persons, including those enjoying the right of free movement** under EU law (i.e. EU citizens and members of their families who are not EU citizens) when they cross the external borders. This obligation shall apply at **all external borders** (air, sea and land borders), **both at entry and exit**.

Article 19 stipulates specific rules for the *various types of border* and the *various means of transport* used for crossing the external borders. Detailed rules have been described in Annex VI. Article 20 sets specific rules for checks on *certain categories of persons*. Annex VII contains detailed rules for:

- heads of state;
- pilots of aircraft and other crew members;
- seamen;
- holders of diplomatic, official or service passports and members of international organisations;
- cross-border workers;
- minors;
- rescue service, police, fire brigades and border guards;
- offshore workers.

Furthermore Article 20 (Specific rules for checks on certain categories of persons) and Annex VI (Specific rules for the various types of border and the various means of transport used for crossing the Member States' external borders) contain detailed instructions for the border crossing procedures. Due to these norms are not in focus of border surveillance they are not discussed in this section.

In addition to border checks SBC includes provisions for border surveillance. Article 13 provides detailed description for *border surveillance*. Pursuant to Article 13.1 the main purpose of border surveillance shall be to prevent unauthorised border crossings, to counter cross-border criminality and to take measures against persons who have crossed the border illegally.

The border guards shall use stationary or mobile units to carry out border surveillance. That surveillance shall be carried out in such a way as to prevent and discourage persons from circumventing the checks at border crossing points. (Article 13.2).

Surveillance between border crossing points shall be carried out by border guards whose numbers and methods shall be adapted to existing or foreseen risks and threats. It shall involve

⁸ Pursuant to Article 8.2 persons enjoying the right of free movement under Union law shall be subjected to checks against 1) the SIS; (2) Interpol's Stolen and Lost Travel Documents (SLTD) database; (3) national databases containing information on stolen, misappropriated, lost and invalidated travel documents. Regarding third-country nationals Member States are obliged to check them systematically against *all relevant* databases.

frequent and sudden changes to surveillance periods, so that unauthorised border crossings are always at risk of being detected. (Article 13.3).

Surveillance shall be carried out by stationary or mobile units which perform their duties by patrolling or stationing themselves at places known or perceived to be sensitive, 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. (Article 13.4).

Additional measures governing surveillance may be adopted in accordance with Article 37.

SBC provides the framework for cooperation between Member States and the third countries, too. According to Article 17 the Member States shall assist each other and shall maintain close and constant cooperation with a view to the effective implementation of border control, in accordance with Articles 7 to 16. They shall exchange all relevant information.

Furthermore, operational cooperation between Member States in the field of management of external borders shall be coordinated by Frontex. (Article 17.2).

Pursuant to Article 17.3 without prejudice to the competences of the Agency, Member States may continue operational cooperation with other Member States and/or third countries at external borders, including the exchange of liaison officers, where such cooperation complements the action of the Agency. Member States shall refrain from any activity which could jeopardise the functioning of the Agency or the attainment of its objectives. Member States shall report to the Agency on the operational cooperation referred to in the first subparagraph.

4.2 Frontex⁹ Regulation

European Agency responsible for management of operational cooperation at the external borders of the Member States of the European Union has been established by EU Regulation (EC) No 2007/2004¹⁰. Regulation was amended by Regulation (EU) No 1168/2011¹¹. Both regulations were repealed by Regulation (EU) 2016/1624¹² which established the *European Border and Coast Guard*. The European Border and Coast Guard comprises the European Border and Coast Guard Agency (Frontex) and national authorities which are responsible for border management, including coast guards to the extent that they carry out border control tasks. Impetus for new regulation was caused by unprecedented migratory flows towards Union territory and need to tackle the dramatic situation at the external borders.

Regulation amended and expanded the provisions of Regulation (EC) No 2007/2004 and Regulation (EC) No 863/2007 of the European Parliament and of the Council¹³, and Council

⁹ Frontex is a well-established name for European Border Agency (see Regulation (EU) 2016/1624, points (9) and (11) in preamble) why it is used for simplicity and consistency of project deliverables.

¹⁰ Council Regulation (EC) No 2007/2004 of 26 October 2004 establishing a European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union.

¹¹ Regulation (EU) No 1168/2011 of the European Parliament and of the Council of 25 October 2011 amending Council Regulation (EC) No 2007/2004 establishing a European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union.

¹² Regulation (EU) 2016/1624 of the European Parliament and of the Council of 14 September 2014 on the European Border and Coast Guard and amending regulation (EU) 2016/399 of the European Parliament and of the Council and repealing Regulation (EC) No 863/2007 of the European Parliament and of the Council, Council Regulation (EC) No 2007/2004 and Council Decision 2005/267/EC.

¹³ Regulation (EC) No 863/2007 of the European Parliament and of the Council of 11 July 2007 establishing a mechanism for the creation of Rapid Border Intervention Teams and amending Council Regulation (EC) No 2007/2004 as regards that mechanism and regulating the tasks and powers of guest officers.

Decision 2005/267/EC¹⁴. Since the amendments were substantial in number and nature, above-mentioned acts, in the interests of clarity, were replaced and repealed.

Regulation (EU) 2016/1624 expanded the ‘concept’ of European Integrated Border Management (IBM). Furthermore, it expanded the tasks and powers of Frontex. The key role of Frontex is to establish a technical and operational strategy for implementation of *integrated border management* (IBM) at Union level; to oversee the effective functioning of border control at the external borders; to provide increased technical and operational assistance to Member States through joint operations and rapid border interventions; to ensure the practical execution of measures in a situation requiring urgent action at the external borders; to provide technical and operational assistance in the support of search and rescue operations for persons in distress at sea; and to organise, coordinate and conduct return operations and return interventions.

Pursuant to Article 4 European integrated border management consists of “all” aspects or components managing borders. Respectively, tasks of European Border and Coast Guard Agency (Frontex) contain numerous tasks related to IBM as (but not limited to):

- monitoring migratory flows;
- carrying out risk analysis and vulnerability assessments;
- monitoring the management of external borders;
- assisting Member States and third countries by providing technical and operational assistance;
- launching rapid border interventions;
- deploying European return interventions;
- developing and operating information systems;
- developing, maintaining and coordinating EUROSUR framework;
- cooperating with European Agencies.

It is important not to confuse different but close related concepts. For example, according to Article 4 ‘European integrated border management’ contains *search and rescue* (SAR) operations for persons in distress at sea launched and carried out in accordance with Regulation (EU) No 656/2014¹⁵ and with international law, taking place in situations which may arise during border surveillance operations at sea. Instead, SAR is not part of ‘border control’ or ‘border surveillance’ within the SBC (see section 3.1). The implementation of Regulation (EU) 2016/1624 does not affect the division of competence between the Union and the Member States under the Treaties, or the obligations of Member States under international conventions such as the United Nations Convention on the Law of the Sea, the International Convention for the Safety of Life at Sea, the International Convention on Maritime Search and Rescue, the International Convention for the Prevention of Pollution from Ships, and other relevant international maritime instruments. Hence, in accordance with Union law and other legal instruments Frontex *assists* Member States in conducting search and rescue operations in order to protect and save lives whenever and wherever so required.

Regulation contains a number of provisions for the exchange of information. Article 10 stipulates an *obligation to exchange information*. In order to perform the tasks conferred on them by Regulation (EU) 2016/1624, in particular for Frontex to monitor the migratory flows, to carry out risk analysis and to perform the vulnerability assessment, Frontex and the national authorities responsible for border management and return, including coast guards to the extent that they carry out border control tasks, shall exchange accurate information in a timely manner. Frontex shall provide adequate information covering all aspects relevant to European integrated border management, especially border control, return, irregular secondary movements of third-country

¹⁴ Council Decision 2005/267/EC of 16 March 2005 establishing a secure web-based Information and Coordination Network for Member States' Migration Management Services.

¹⁵ See section 3.4 Surveillance of External Sea Borders.

nationals within the Union, prevention of cross-border crime including facilitation of unauthorised border crossings, trafficking in human beings, terrorism and threats of a hybrid nature, as well as the situation in neighbouring third countries, so as to allow for appropriate measures to be taken or to tackle identified threats and risks with a view to improving the integrated management of the external borders. Respectively, Member States should also, in their own interests and in the interests of other Member States, enter data into the European databases. Equally, they should ensure that the data are accurate, up-to-date and obtained and entered lawfully.

Effective implementation of an integrated management of the external borders requires regular, swift and reliable exchange of information among the Member States. The Agency should develop and operate information systems facilitating such exchange in accordance with Union data protection legislation. It is important that Member States provide the Agency promptly with complete and accurate information that it needs to perform its tasks. (Preamble 42)

Any processing of personal data by the Agency within the framework of this Regulation should be conducted in accordance with Regulation (EC) No 45/2001¹⁶. Any processing of personal data by Member States within the framework of this Regulation should be conducted in accordance with Directive 95/46/EC¹⁷. In cases where the processing of data is necessary primarily for the purpose of ensuring a high level of internal security within the Union, especially in the context of actions relating to the monitoring of migratory flows and risk analysis, the processing of personal data collected during joint operations, pilot projects and rapid border interventions and by migration management support teams, or the cooperation with Union institutions, bodies, offices, agencies, and international organisations, Council Framework Decision 2008/977/JHA¹⁸ applies. Any processing of personal data should respect the *principles of necessity and proportionality*.

Article 11 regulates monitoring of migratory flows and risk analysis. Pursuant to this article Frontex shall monitor migratory flows towards and within the Union, trends and other possible challenges at the external borders of the Union. For that purpose Frontex shall prepare general risk analyses, which shall cover *all aspects* relevant to European integrated border management with a view to *developing a pre-warning mechanism*. Member States shall provide the Agency with all necessary information regarding the situation, trends and possible threats at the external borders and in the field of return. Member States shall regularly, or upon the request of the Agency, provide it with all relevant information such as statistical and operational data collected in relation to the implementation of the Schengen *acquis* as well as information from the analysis layer of the national situational picture established in accordance with Regulation (EU) No 1052/2013.

Chapter III Section 2 (Articles 44-50) contains general provisions on information exchange and data protection. Pursuant to Article 44 Frontex may take all necessary measures to facilitate the exchange of information relevant to its tasks with the Commission and the Member States and, where appropriate, the relevant Union agencies. It shall develop and operate an information

¹⁶ Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data.

¹⁷ Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data.

¹⁸ Council Framework Decision 2008/977/JHA of 27 November 2008 on the protection of personal data processed in the framework of police and judicial cooperation in criminal matters. It has been repealed by Directive (EU) 2016/680 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data by competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, and on the free movement of such data, and repealing Council Framework Decision 2008/977/JHA.

system capable of exchanging *classified information* with those actors, and of exchanging *personal data* referred to in Articles 45, 47, 48 and 49 of this Regulation in accordance with Council Decision 2013/488/EU¹⁹ and Commission Decision (EU, Euratom) 2015/444²⁰.

According to Article 45 (Data protection) Frontex shall apply Regulation (EC) No 45/2001 when processing personal data. The transfer of personal data to authorities of third countries or third parties, including international organisations, is prohibited. Article 46 contains an exhaustive list of when personal data may be processed of which the following may be relevant for RANGER:

- performing its tasks of organising and coordinating joint operations, pilot projects, rapid border interventions and in the framework of the migration management support teams in accordance with Article 47;
- risk analysis by the Agency in accordance with Article 11;
- identifying and tracking vessels in the framework of EUROSUR in accordance with Article 49;
- administrative tasks.

Article 47 stipulates processing of personal data collected during joint operations, pilot projects and rapid border interventions and by migration management support teams. Frontex shall only process the following categories of personal data collected and transmitted to it by the Member States or by its own staff in the context of joint operations, pilot projects and rapid border interventions, and by migration management support teams:

- (a) personal data regarding persons who are suspected, on reasonable grounds, by the competent authorities of the Member States, of involvement in cross-border crime, such as migrant smuggling, trafficking in human beings or terrorism;
- (b) personal data regarding persons who cross the external borders without authorisation and whose data is collected by the European Border and Coast Guard teams, including when acting in the framework of the migration management support teams;
- (c) license plate numbers, vehicle identification numbers, telephone numbers or ship identification numbers which are linked to the persons referred to in (a) and (b), and which are necessary for investigating and analysing routes and methods used for illegal immigration and cross-border crime.

Pursuant to paragraph 3 in Article 47 personal data shall be deleted as soon as they have been transmitted to EASO, Europol or Eurojust or to the competent authorities of Member States or used for the preparation of risk analyses. The storage period shall, in any event, not exceed 90 days after the date of the collection of those data. In the results of risk analyses, data shall be anonymised.

Frontex may process personal data in the framework of EUROSUR as set in Article 13(2) of Regulation (EU) No 1052/2013. Finally, Article 50 provides security rules on the protection of classified information and non-classified sensitive information. Frontex shall apply the Commission's rules on security as set out in Decision (EU, Euratom) 2015/444. Those rules shall apply, *inter alia*, to the exchange, processing and storage of classified information. Furthermore, Frontex shall apply the security principles relating to the processing of non-classified sensitive information as set out in the Decision (EU, Euratom) 2015/444 and as implemented by the Commission.

¹⁹ Council Decision 2013/488/EU of 23 September 2013 on the security rules for protecting EU classified information.

²⁰ Commission Decision (EU, Euratom) 2015/444 of 13 March 2015 on the security rules for protecting EU classified information.

4.3 EUROSUR Regulation²¹

European Border Surveillance System (EUROSUR) has been established in order to strengthen the exchange of information and the operational cooperation between national authorities of Member States as well as with Frontex. EUROSUR provides those authorities and Frontex with the infrastructure and tools needed to improve their situational awareness and reaction capability at the external borders of the Member States of the Union for the purpose of detecting, preventing and combating illegal immigration and cross-border crime and contributing to ensuring the protection and saving the lives of migrants.

According to preamble (13) of Regulation (EU) No 1052/2013 “Any 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. Directive 95/46/EC of the European Parliament and of the Council, Regulation (EC) No 45/2001 of the European Parliament and of the Council and Council Framework Decision 2008/977/JHA are applicable in cases in which more specific instruments, such as Regulation (EC) No 2007/2004, do not provide a full data protection regime.”

EUROSUR Regulation establish EUROSUR framework and operational requirement of functioning of the framework²². EUROSUR framework consists of six components (national coordination centres, national situational pictures (NSP), communication network, European situational picture (ESP), common pre-frontier intelligence picture (CPIP) and common application of surveillance tools). For example, according to Article 7 communication network shall allow for the exchange of non-classified sensitive and classified information in a secure manner and in near-real-time with, and among, the national coordination centres. The network shall be operational twenty four hours a day and seven days a week and shall allow for:

- (a) bilateral and multilateral information exchange in near-real- time;
- (b) audio and video conferencing;
- (c) secure handling, storing, transmission and processing of non-classified sensitive information;
- (d) secure handling, storing, transmission and processing of EU classified information up to the level of RESTREINT UE/EU RESTRICTED or equivalent national classification levels, ensuring that classified information is handled, stored, transmitted and processed in a separate and duly accredited part of the communication network.

Furthermore, pursuant to Article 7.5 Member States' authorities, agencies and other bodies using the communication network shall ensure that equivalent security rules and standards as those applied by Frontex are complied with for the handling of classified information.

Due to radars are used for situational awareness (NSP, ESP, CPIP) as a part of EUROSUR framework, they have to meet above mentioned EUROSUR requirements. Furthermore, Article 13 provides regulation on processing of personal data. Pursuant to Article 13.1 where the national situational picture is used for the processing of personal data, those data shall be processed in accordance with Directive 95/46/EC, Framework Decision 2008/977/JHA and the relevant national provisions on data protection. According to Article 13.2 the European situational picture and the common pre-frontier intelligence picture may be used only for the processing of personal data concerning ship identification numbers. Those data shall be processed in accordance with Article 11ca of Regulation (EC) No 2007/2004. Pursuant to Article 11ca processing of such data shall respect the principles of

²¹ Regulation (EU) No 1052/2013 of the European Parliament and of the Council of 22 October 2013 establishing the European Border Surveillance System (Eurosir).

²² For more information see Deliverable D2.2.

necessity and proportionality and the onward transmission or other communication of such personal data processed by Frontex to third countries shall be prohibited. Furthermore, they shall be processed only for the purposes of detecting, identifying and tracking vessels, as well as for the purposes referred to in Article 11c(3) of that Regulation. They shall automatically be deleted within seven days of receipt by Frontex or, where additional time is needed in order to track a vessel, within two months of receipt by Frontex.

Finally, EUROSUR Regulation establishes some quality requirements for information that will be exchanged within EUROSUR framework. According to Article 18.4 information shall fulfill the criteria of availability, confidentiality and integrity. In order to do so it is highly important that information provided by RANGER radars meet these requirements, too.

4.4 Surveillance of External Sea Borders

Regulation (EU) No 656/2014²³ establishes rules for the surveillance of the external sea borders in the context of operational cooperation coordinated by the European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union.

Regulation extends the concept of border surveillance. According to preamble (1) “border surveillance is not limited to the detection of attempts at unauthorised border crossings but equally extends to steps such as intercepting vessels suspected of trying to gain entry to the Union without submitting to border checks, as well as arrangements intended to address situations such as search and rescue that may arise during a border surveillance operation at sea and arrangements intended to bring such an operation to a successful conclusion.” On the other hand, pursuant to Article 1 the scope of application of the Regulation is limited to *border surveillance operations* carried out by Member States at their external sea borders in the context of operational cooperation coordinated by Frontex.

Cooperation with neighbouring third countries is crucial to prevent unauthorised border crossings, to counter cross-border criminality and to avoid loss of life at sea. In accordance with Regulation (EC) No 2007/2004 Frontex may cooperate with the competent authorities of third countries, in particular as regards risk analysis, and should facilitate operational cooperation between Member States and third countries. Cooperation with third countries may even take place *on the territory or the territorial sea of those countries* provided that it complies with norms and standards at least equivalent to those set by Union law.

During border surveillance operations at sea, Member States should respect their respective obligations under international law, in particular the United Nations Convention on the Law of the Sea, the International Convention for the Safety of Life at Sea, the International Convention on Maritime Search and Rescue, the United Nations Convention against Transnational Organized Crime and its Protocol against the Smuggling of Migrants by Land, Sea and Air, the United Nations Convention relating to the Status of Refugees, the European Convention for the Protection of Human Rights and Fundamental Freedoms, the International Covenant on Civil and Political Rights, the United Nations Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, the United Nations Convention on the Rights of the Child and other relevant international instruments.

As described above Regulation addresses readiness for search and rescue during border surveillance operations. In accordance with international law, every State must require the master of a vessel flying its flag, in so far as he can do so without serious danger to the vessel, the crew

²³ Regulation (EU) No 656/2014 of the Parliament and of the Council of 15 May 2014 establishing rules for the surveillance of the external sea borders in the context of operational cooperation coordinated by the European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union.

or the passengers, to render assistance without delay to any person found at sea in danger of being lost and to proceed with all possible speed to the rescue of persons in distress. Such assistance should be provided regardless of the nationality or status of the persons to be assisted or of the circumstances in which they are found. The shipmaster and crew should not face criminal penalties for the sole reason of having rescued persons in distress at sea and brought them to a place of safety. Article 9 regulates search and rescue situations addressing obligation of duty of care and by taking any measure necessary for the safety of the persons concerned, while avoiding to take any action that might aggravate the situation or increase the chances of injury or loss of life.

Regulation puts great emphasis on protection of fundamental rights. Pursuant to Article 4.5 any exchange with third countries of personal data obtained during a sea operation for the purposes of this Regulation shall be strictly limited to what is absolutely necessary and shall be carried out in accordance with Directive 95/46/EC²⁴, Council Framework Decision 2008/977/JHA²⁵ and relevant national provisions on data protection.

Chapter III contains specific rules regarding detection and interception in different maritime zones (the territorial sea, the high seas, the contiguous zone). It is noteworthy, that even though Regulation covers Frontex-led border surveillance operations, pursuant to the Article 5.3 the participating units shall collect and report information about *any* vessel suspected of being engaged in illegal activities at sea, which are *outside the scope of the sea operation*, to the International Coordination Centre, which shall transmit that information to the National Coordination Centre of the Member State concerned.

Furthermore, *on the high seas*, where there are reasonable grounds to suspect that a vessel is engaged in the smuggling of migrants by sea, the participating units are authorized, pursuant to Article 7, to take proper actions in accordance with the Protocol against the Smuggling of Migrants, and where relevant, national and international law.

Regulation contains provision on stateless vessels, too. According to Article 7.11 where there are reasonable grounds to suspect that a *stateless vessel* is engaged in the smuggling of migrants by sea, the participating unit may board and search the vessel with a view to verifying its statelessness. If evidence confirming that suspicion is found, the participating unit shall inform the host Member State which may take, directly or with the assistance of the Member State to whom the participating unit belongs, further appropriate measures in accordance with national and international law.

Pursuant to Article 7.14 where the grounds to suspect that a vessel is engaged in the smuggling of migrants on the high seas prove to be unfounded or where the participating unit does not have jurisdiction to act, but there remains a reasonable suspicion that the vessel is carrying persons intending to reach the border of a Member State and to circumvent checks at border crossing points, that vessel shall continue to be *monitored*. The International Coordination Centre shall communicate information about that vessel to the National Coordination Centre of the Member States towards which it is directed.

²⁴ Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data.

²⁵ Council Framework Decision 2008/977/JHA of 27 November 2008 on the protection of personal data processed in the framework of police and judicial cooperation in criminal matters.

5. Transnational Threat of Irregular Migration

5.1 UN Convention on the Law of the Sea (UNCLOS)

The United Nations Convention on the Law of the Sea (UNCLOS) is a comprehensive framework for the allocation of sovereignty, jurisdiction, and rights and duties among States, that carefully balances the interests of coastal States in exploiting the resources and controlling activities off their coasts with the interests of the international community in maintaining freedom of navigation and overflight and other lawful uses of the seas. In that sense UNCLOS is an “umbrella” treaty providing the basis for a number of follow-on treaties and laws.

Threats to international maritime security include among others maritime piracy and ship hijacking, use of the sea by terrorists, smugglers of illicit cargo, human traffickers, international criminal and extremist organizations, intentional and unlawful damage to maritime environment, intentional or illegal dumping and vessel discharge of pollutants, illegal, unreported and unregulated fishing, as well as more attenuated threats, such as the spread of infectious disease, and accidental marine environmental degradation (Kraska & Pedrozo 2013). Hence, the most impressive threats for maritime border surveillance will be discussed in the framework of maritime security law.

5.1.1 Freedom of Navigation

There is no right of innocent passage by foreign vessels in internal waters.

A fundamental tenet of international law is that all ships, including warships, enjoy right of innocent passage through the territorial seas of coastal States (UNCLOS, Article 17).

Passage must be “continuous and expeditious”, but may include stopping and anchoring if incidental to ordinary navigation or “rendered necessary by force majeure or distress or for the purpose of rendering assistance to persons, ships or aircraft in danger or distress. Innocent passage does not, however, include a right of overflight over the territorial sea.

Pursuant to Article 19, “passage is innocent so long as it is not prejudicial to the peace, good order or security of the coastal state”. An inclusive list of activities considered to be non-innocent is contained in Article 19.2 and includes:

- (a) any threat or use of force against the sovereignty, territorial integrity or political independence of the coastal State, or in any other manner in violation of the principles of international law embodied in the Charter of the United Nations;
- (b) any exercise or practice with weapons of any kind;
- (c) any act aimed at collecting information to the prejudice of the defence or security of the coastal State;
- (d) any act of propaganda aimed at affecting the defence or security of the coastal State;
- (e) the launching, landing or taking on board of any aircraft;
- (f) the launching, landing or taking on board of any military device;
- (g) the loading or unloading of any commodity, currency or person contrary to the customs, fiscal, immigration or sanitary laws and regulations of the coastal State;
- (h) any act of willful and serious pollution contrary to the Convention;
- (i) any fishing activities;
- (j) the carrying out of research or survey activities;
- (k) any act aimed at interfering with any systems of communication or any other facilities or installations of the coastal State;
- (l) any other activity not having a direct bearing of passage.

Equipment or anti-terrorism measures employed to protect the safety or security of the ship are not inconsistent with innocent passage. Additionally, vessel cargo, means of propulsion, flag or registry, origin, destination, or purpose of the voyage cannot be used as criteria by coastal State to inform a determination that the passage is not innocent. (Kraska & Pedrozo 2013, 219.)

Beyond the 200 nautical miles EEZ lies the high seas, which remain open to all States. Pursuant to Article 89 in UNCLOS “No State may validly purport to subject any part of the high seas to its sovereignty.” Freedom of the high seas includes:

- freedom of navigation and overflight;
- freedom of lay submarine cables and pipelines;
- freedom to construct artificial islands and other installations;
- freedom of fishing;
- freedom of scientific research; and
- other internationally lawful uses of the sea.

Pursuant to Article 87 of UNCLOS, warships and military aircraft enjoy freedom of movement and operation on and over the high seas, including task force maneuvering, flight operations, military exercises, surveillance, intelligence gathering activities, and ordnance testing and firing.

5.2 Transnational Organized Crime Convention (TOCC)

The United Nations Convention against Transnational Organized Crime (TOCC) was adopted by the General Assembly on November 15, 2000, and it entered into force on September 29, 2003. The TOCC is the main international instrument to bring states together in the fight against transnational organized crime. It is supplemented by three Protocols: the Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children; The Protocol against the Smuggling of Migrants by Land, Sea and Air (*Migrant Smuggling Protocol*); and the Protocol against the Illicit Manufacturing of and Trafficking in Firearms; their Parts and Components and Ammunition. However, before a country can become a party to any of the Protocols, it must first become a party to the Convention.

The convention reflects a major effect by the international community in the fight against transnational organized crime and the serious problems associated with it. Close international cooperation is necessary to address the threat, and 172 State Parties to the Convention commit to taking numerous measures against transnational organized crime. Some of these measures include:

- the creation of domestic criminal offences (participation in the organized criminal group, money laundering, corruption and obstruction of justice);
- the adoption of new and sweeping frameworks for extradition, mutual legal assistance and law enforcement cooperation;
- the promotion of training and technical assistance for building or upgrading the necessary capacity of national authorities. (Kraska & Pedrozo 2013, 660-661.)

People who cross the border illegally may be involved in numerous criminal activities. Despite this, and due to focus of this report is in maritime surveillance, legal framework regarding cross-border crime will not be discussed in this report.

5.3 Migrant Smuggling Protocol

The Migrant Smuggling Protocol addresses the growing problem of organized criminal groups who smuggle migrants for profit, often at high risk to the migrants. Its stated purpose is “to prevent and combat the smuggling of migrants, as well as to promote cooperation among State Parties to that end, while protecting the rights of smuggled migrants.”

Migrant smuggling is defined in Article 3 of the Protocol as “the procurement, in order to obtain, directly or indirectly, a financial or other material benefit, of the illegal entry of a person into a State Party of which the person is not a national or a permanent resident”. However, the Protocol does not apply to all migrant smuggling operations.

Article 4 limits application of the Protocol to “the prevention, investigation and prosecution of offences established in accordance with article 6 of [the] Protocol, where the offences are transnational in nature and involved an organized criminal group, as well as to the protection of the rights of persons who have been the object of such offences.” The prohibited activities therefore must be transnational in character and involve an organized criminal group. Ad hoc, small scale operations by family members or larger events involving international human rights groups are excluded.

Pursuant to Article 6 smuggling of migrants and related activities that enable a migrant to circumvent national migratory laws constitute criminal offences under the Protocol. The Protocol makes clear, however, that migrants cannot be criminally prosecuted for the simple act of having been smuggled (see Article 5). Nonetheless, smuggled migrants may be prosecuted for violation of immigration laws of the nation concerned (Article 6.4). The smugglers are the primary targets of the Protocol, rather than the migrants.

Chapter II of the Protocol focuses on suppression of specific acts or criminal enterprise involved with smuggling of migrants by sea, and it requires States to “cooperate to the fullest extent possible to prevent and suppress the smuggling of migrants by sea, in accordance with the international law of the sea.” To facilitate cooperation, Article 8 sets measures that can be implemented by the State Parties to prevent the smuggling of migrants by sea, including an elaborate regime to allow the boarding and inspection of ships that are suspected of engaging in migrant smuggling operations. Flag States may request assistance from the other States to prevent the use of its vessels for the smuggling of migrants if the flag State has reasonable grounds to believe one of its ships is either flying its flag or claiming its registry without authority, and is involved in smuggling (Article 8.1). If requested, other States are required to render assistance to the extent possible.

Consistent with Articles 92(2) and 110 of UNCLOS, the Protocol authorizes any State to board and search a *stateless vessel* if the State concerned “has reasonable grounds to suspect that a vessel is engaged in the smuggling of migrants by sea and is without nationality or may be assimilated to a vessel without nationality (Article 8(7)). If evidence of smuggling is found during the boarding process, the State interdicting the suspect vessel may also, pursuant to Article 8(7), “take appropriate measures in accordance with relevant domestic and international law”.

In circumstances where irregular migrants are interdicted by government authorities of a destination or transit State, Article 18 of the Protocol requires the State of origin “to facilitate and accept, without undue or reasonable delay”, the return of migrants who are its nationals or permanent residents. Return of migrants to their State of origin shall be carried out “in an orderly manner and with due regard for the safety and dignity of the person.” However, nothing in the provisions on return affect any obligation “entered into under any other applicable treaty, bilateral or multilateral, or any other applicable operational agreement or arrangement that governs... the return of persons...” who have been smuggled. That is, States may take bilateral agreement to further implement Article 18. Italy and Libya, for example, completed an agreement that provides that the “Parties will exchange information on the flows of illegal migrants, on criminal organizations that promote them, on *modus operandi* and the routes taken and the specialized agencies in forging documents and passports, and the reciprocal assistance and cooperation in combating illegal migration, including the repatriation of illegal immigrants.” (Kraska & Pedrozo 2013, 665-666).

5.4 IMO Initiatives

International Maritime Organization (IMO) plays the leading role in building out the international law of the sea, developing conventions, codes, and guidelines to make shipping safer and more secure.

Due to “incidents involving the smuggling of aliens on board ships and the serious problems associated with such activities for safety of life at sea” and the “numerous incidents involving the smuggling of aliens on board ships have resulted in sickness, disease and death of the individuals concern” International Maritime Organization (IMO) have adopted several initiatives²⁶ to tackle the problem.²⁷ IMO Resolution A.773(18) constructs an overarching framework for states to work together to avoid maritime migrant smuggling tragedies. Member States were called upon to, *inter alia*:

- cooperate to suppress unsafe practices with alien smuggling by sea;
- develop agreements and procedures to facilitate this cooperation;
- share information on ships believed to be engaged in such unsafe practices;
- authorize other States to conduct safety examinations on their behalf of ships entitled to fly their flag that are suspected of engaging in unsafe practices associated with alien smuggling, and
- take appropriate action against stateless vessels engage in alien smuggling.²⁸

IMO adopted Interim Guidelines for Combating Unsafe Practices Associated with the Trafficking or Transport of Migrants by Sea in December 1998²⁹. The guidelines were subsequently amended in 2001³⁰. The Circular provides non-binding measures for the prevention and suppression of unsafe practices associated with the trafficking and transport of migrants by sea, and it was adopted as an interim measure pending entry into force of the Migrant Smuggling Protocol to the TOCC.

The revised Circular defines “unsafe practices” as “any practice, which involves operating a ship that is obviously in conditions which violate fundamental principles of safety at sea, in particular those of the SOLAS Convention; or not properly manned, equipped or licenced for carrying passengers on international voyages, and thereby constitute a serious danger for the lives or the health of the persons on board, including the conditions for embarkation and disembarkation.”³¹

Hence, States are called on to take steps relating to maritime safety, in accordance with domestic and international law, to eliminate unsafe practices associated with the trafficking or transport of migrants by sea. Furthermore, States are called upon to *cooperate to the fullest extent possible* in the prevention and suppression of unsafe practices associated with the trafficking or transport of migrants by sea in conformity with international law.

Paragraph 16 recognizes the assertion of universal jurisdiction over stateless vessels. The paragraph authorizes States to conduct a *safety examination* of any ship “when there are reasonable grounds to suspect [it] is engaged in unsafe practices associated with trafficking or transport of

²⁶ E.g. Assembly Resolution A.773(18), Assembly Resolution A.867(20), and Maritime Safety Committee Circular 896.

²⁷ IMO Doc. A.773(18), Enhancement of Safety of Life at Sea by the Prevention and Suppression of Unsafe Practices Associated with the Smuggling of Aliens by Ships, November 4, 1993.

²⁸ Id.

²⁹ Guidelines are also referred as Maritime Safety Committee Circular 896, IMO Doc. MSC/Circ.896, Interim Measures for combatting Unsafe Practices Associated with the Trafficking or Transport of Migrants by Sea, December 16, 1998.

³⁰ MSC/Circ.896/Rev.1, Interim Measures for combatting Unsafe Practices Associated with the Trafficking or Transport of Migrants by Sea, June 12, 2001.

³¹ Id., para. 2.3.



migrants by sea” and the vessel was considered “without nationality, or has been assimilated to a ship without nationality”.

6. Protection of Fundamental Rights

Besides UNCLOS many other laws regulate maritime activities. In accordance with international law every vessel is obliged to render assistance without delay to any person found at sea in danger of being lost and to proceed with all possible speed to the rescue of persons in distress.

Furthermore, International human rights have to be protected when processing people detected and rescued during maritime surveillance operations. Finally, special regulation for radars (e.g. technical standards, protection of environment) have to be taken into account when developing radars for maritime surveillance.

6.1 Safety of Life at Sea

6.1.1 International Convention for the Safety of Life at Sea (SOLAS)

Among all of the international treaties concerning the safety of commercial ships, International Convention for the Safety of Life at Sea (*SOLAS Convention*) is the most important. Initially adopted in 1914 in response to the *Titanic* disaster, subsequent versions of the treaty in 1929, 1948, 1960 and 1974 address virtually every aspect of safety of life at sea, including the *duty to assist* mariners in distress.

The obligation to provide assistance was originally contained in Article 45 of the 1929 Convention. Article 45 was replaced in 1948 with Regulation V/10, which remained in the 1960 and 1974 editions of the Convention. However, amendments to 1974 Convention in 2004 replaced Regulation V/10 with Regulation V/33. Regulation V/33 establishes several new obligations and procedures that apply during distress situations. The provisions are fairly comprehensive.

Pursuant to SOLAS Regulation V/33 the master of a ship at sea which is in a position to be able to provide assistance on receiving information from any source that persons are in distress at sea, is bound to proceed with all speed to their assistance, if possible informing them or the SAR service that the ship is doing so. This obligation to provide assistance applies regardless of the nationality or status of such persons or the circumstances in which they are found. If the ship receiving the distress alert is unable to provide assistance, the master must enter in the log-book the reason for failing to proceed to the assistance of the persons in distress.

Contracting Governments shall coordinate and cooperate to ensure that masters of ships providing assistance by embarking persons in distress at sea are released from their obligations with minimum further deviation from the ships' intended voyage. The Contracting Governments responsible for the SAR region in which such assistance is rendered shall exercise primary responsibility for ensuring such coordination and cooperation occurs, so that survivors assisted are disembarked from the assisting ship and delivered to a place of safety.

It is noteworthy that SOLAS requirements do not apply to sovereign immune vessels. Regulation I/3 indicates that “the present Regulations, unless expressly provided otherwise, do not apply to: (i) Ships of war and troopships...”³² Additionally, Regulation V/1 exempts “warships, naval auxiliaries or other ships owned or operated by a Contracting Government and used only on government non-commercial service” from the requirements of Chapter V. Such vessels, however, “are encouraged to act in a manner consistent, so far as reasonable and practicable, with this chapter.”³³

³² SOLAS Regulation I/3.

³³ SOLAS Regulation V/1.

6.1.3 International Convention on Maritime Search and Rescue

The requirement to provide assistance to mariners in distress is also found in the 1979 International Convention on Maritime Search and Rescue (*SAR Convention*). Chapter 2 requires parties to ensure that assistance is “provided to any person in distress at sea...regardless of the nationality or status of such a person or the circumstances in which the person is found.” Rescue is defined in the 1998 amendments to the Convention as “an operation to retrieve persons in distress, provide for their initial medical or other needs, and deliver them to place of safety”.³⁴

Like SOLAS, the Annex to the SAR Convention was also amended after the M/V Tampa³⁵ incident by adding a new paragraph to Chapter 3, which now provides:

Parties shall coordinate and cooperate to ensure that masters of ships providing assistance by embarking persons in distress at sea are released from their obligations with minimum further deviation from the ships’ intended voyage, provided that releasing the master of the ship from these obligations does not further endanger the safety of life at sea.”

The State Party responsible for SAR responsibilities in the region in which assistance is rendered has primary responsibility for coordination and cooperation so that survivors are properly assisted and disembarked to a place of safety. Furthermore, rescued persons are assured quick transportation to safety, as “the relevant Parties shall arrange for such disembarkation to be effected as soon as reasonably practicable.”

6.2 Refugee Convention

The Migrant Smuggling Protocol provides that “nothing on this Protocol shall affect the other right, obligations and responsibilities of States and individuals under international law, including international humanitarian law and international human rights law and, in particular, where applicable, the 1951 Convention and the 1967 Protocol relating to the Status of Refugees and the principle of *non-refoulement* as contained therein.”³⁶ Similarly, paragraph 5 of the IMO Interim Guidelines requires that any measures taken “should be in conformity with the international law of the sea and all generally accepted relevant international instruments, such as the United Nations 1951 Convention and the 1967 Protocol Relating to the Status of Refugees.”

The Convention prohibits States from imposing “penalties, on account of their illegal entry on presence, on refugees who, coming directly from a territory where their life or freedom was threatened in the sense of article 1, enter or are present in their territory without authorization, provided they present themselves without delay to the authorities and show good cause for their illegal entry or presence”.³⁷

Article 32 of the Convention restricts States from expelling a refugee lawfully in their territory, except on “grounds of national security or public order”. In this regard, expulsion “shall be only in pursuance of decision reached in accordance with due process of law”. Furthermore, unless required by compelling reasons of national security, “the refugee shall be allowed to submit evidence to clear himself” and to effect an appeal.

Article 33 prohibits *refoulement* (return) of a refugee to areas “where his life or freedom would be threatened on account of his race, religion, nationality, membership of a particular social group or political opinion.” The prohibition on *refoulement*, however, does not apply to refugees for

³⁴ SOLAS, Annex, Chapter 1, para. 1.3.2.

³⁵ M/V Tampa incident occurred in August 2001. On August 24, the Norwegian freighter *M/V Tampa* rescued 438 refugees, mostly Afghan nationals, from a 20-metre Indonesian fishing boat, the *Palapa 1*, about 140 kilometers north of Christmas Island. The *Palapa 1* was in extremis, as the ship was sinking.

³⁶ Migrant Smuggling Protocol, Article 19.

³⁷ 1951 Refugee Convention, Article 31.

whom there are “reasonable grounds for regarding as a danger” to public security, such as having been convicted of a “serious crime”.

6.3 Protection of Fundamental Rights in EU Border Law

European border law introduced in section 4 contains numerous provisions of the protection of human rights. Article 4 (Fundamental Rights) of Schengen Borders Code³⁸ provides “When applying this Regulation, Member States shall act in full compliance with relevant Union law, including the Charter of Fundamental Rights of the European Union (‘the Charter’), relevant international law, including the Convention Relating to the Status of Refugees done at Geneva on 28 July 1951 (‘the Geneva Convention’), obligations related to access to international protection, in particular the principle of *non-refoulement*, and fundamental rights. In accordance with the general principles of Union law, decisions under this Regulation shall be taken on an individual basis.

Frontex Regulation (EU) 2016/1624 establishing the European Border and Coast Guard states when defining the subject matter in Article 1 that it will “ensure a high level of internal security within the Union in full respect for fundamental rights, while safeguarding the free movement of persons within it.” Article 34 is dedicated to protection of fundamental rights provided the creation of a specific strategy for the protection of human rights. Pursuant to Article 34 “The European Border and Coast Guard shall guarantee the protection of fundamental rights in the performance of its tasks under this Regulation in accordance with relevant Union law, in particular the Charter, relevant international law — including the 1951 Convention Relating to the Status of Refugees, the 1967 Protocol thereto and obligations related to access to international protection, in particular the principle of *non-refoulement*.” Furthermore, for that purpose, Frontex shall draw up, further develop and implement a *fundamental rights strategy* including an effective mechanism to monitor the respect for fundamental rights in all the activities of Frontex.

According to Article 34.2 when performing of its tasks, the European Border and Coast Guard (EBCG) shall ensure that no person is disembarked in, forced to enter, conducted to, or otherwise handed over or returned to, the authorities of a country in contravention of the principle of *non-refoulement*, or from which there is a risk of expulsion or return to another country in contravention of that principle. Furthermore, EBCG shall take into account the special needs of children, unaccompanied minors, persons with disabilities, victims of trafficking in human beings, persons in need of medical assistance, persons in need of international protection, persons in distress at sea and other persons in a particularly vulnerable situation (Article 34.3).

EUROSUR Regulation (EU) No 1052/2013, too, highlights the importance of protection of fundamental rights. As stipulated in the preamble point (11) “This Regulation respects the fundamental rights and observes the principles recognised by Articles 2 and 6 of the Treaty on European Union (TEU) and by the Charter of Fundamental Rights of the European Union, in particular respect for human dignity, the right to life, the prohibition of torture and inhuman or degrading treatment or punishment, the prohibition of trafficking in human beings, the right to liberty and security, the right to the protection of personal data, the right of access to documents, the right to asylum and to protection against removal and expulsion, *non-refoulement*, non-discrimination and the rights of the child. This Regulation should be applied by Member States and the Agency in accordance with those rights and principles.”

Aforementioned principles have been established in Article 2 (Scope) paragraph 4 as follows: “Member States and the Agency shall comply with fundamental rights, in particular the principles of *non-refoulement* and respect for human dignity and data protection requirements, when applying this Regulation. They shall give priority to the special needs of children, unaccompanied minors, victims of human trafficking, persons in need of urgent medical assistance, persons in

³⁸ Regulation (EU) 2016/399.

need of international protection, persons in distress at sea and other persons in a particularly vulnerable situation.”

Finally, Regulation (EU) No 656/2014 establishing rules for the surveillance of the external sea borders contains a number of provisions relating to the protection of human rights. The most important articles are Article 4 (Protection of fundamental rights and the principle of non-refoulement) and Article 9 (Search and rescue situations). Provisions of protection of fundamental rights are more detailed than in other border law, therefore, they are presented here.

Pursuant to Article 4 “No person shall, in contravention of the principle of *non-refoulement*, be disembarked in, forced to enter, conducted to or otherwise handed over to the authorities of a country where, inter alia, there is a serious risk that he or she would be subjected to the death penalty, torture, persecution or other inhuman or degrading treatment or punishment, or where his or her life or freedom would be threatened on account of his or her race, religion, nationality, sexual orientation, membership of a particular social group or political opinion, or from which there is a serious risk of an expulsion, removal or extradition to another country in contravention of the principle of *non-refoulement*.”

According to Article 4.2 when considering the possibility of disembarkation in a third country, in the context of planning a sea operation, the host Member State, in coordination with participating Member States and Frontex, shall take into account the general situation in that third country. Intercepted or rescued persons shall not be disembarked, forced to enter, conducted to or otherwise handed over to the authorities of a third country when the host Member State or the participating Member States are aware or ought to be aware that that third country engages in practices as described in paragraph 1.

Article 4.3 provides that during a sea operation, before the intercepted or rescued persons are disembarked in, forced to enter, conducted to or otherwise handed over to the authorities of a third country and taking into account the assessment of the general situation in that third country in accordance with paragraph 2, the participating units shall, without prejudice to Article 3, use all means to identify the intercepted or rescued persons, assess their personal circumstances, inform them of their destination in a way that those persons understand or may reasonably be presumed to understand and give them an opportunity to express any reasons for believing that disembarkation in the proposed place would be in violation of the principle of *non-refoulement*.

Article 4.4 stipulates how throughout a sea operation, the participating units shall address the special needs of children, including unaccompanied minors, victims of trafficking in human beings, persons in need of urgent medical assistance, disabled persons, persons in need of international protection and other persons in a particularly vulnerable situation. In addition, pursuant to Article 4.6 “participating units shall, in the performance of their duties, fully respect human dignity”.

Article 9 regulates search and rescue situations. Pursuant to Article 9 Member States shall observe their obligation to render assistance to any vessel or person in distress at sea and, during a sea operation, they shall ensure that their participating units comply with that obligation, in accordance with international law and respect for fundamental rights. They shall do so regardless of the nationality or status of such a person or the circumstances in which that person is found.

Furthermore, Article 9 stipulates, when a vessel or the persons shall be considered to be in the phase of uncertainty, alert, or distress. In such cases, participating units shall take into account and transmit all relevant information and observations to the responsible Rescue Coordination Centre including on:

- the existence of a request for assistance, although such a request shall not be the sole factor for determining the existence of a distress situation;

- the seaworthiness of the vessel and the likelihood that the vessel will not reach its final destination;
- the number of persons on board in relation to the type and condition of the vessel;
- the availability of necessary supplies such as fuel, water and food to reach a shore;
- the presence of qualified crew and command of the vessel;
- the availability and capability of safety, navigation and communication equipment;
- the presence of persons on board in urgent need of medical assistance;
- the presence of deceased persons on board;
- the presence of pregnant women or of children on board;
- the weather and sea conditions, including weather and marine forecasts.

While awaiting instructions from the Rescue Coordination Centre (RCC), participating units shall take all appropriate measures to ensure the safety of the persons concerned. Furthermore, pursuant to Article 9.2 (h) "Where a vessel is considered to be in a situation of uncertainty, alert or distress but the persons on board refuse to accept assistance, the participating unit shall inform the responsible Rescue Coordination Centre and follow its instructions. The participating unit shall continue to fulfil a *duty of care* by surveying the vessel and by taking any measure necessary for the safety of the persons concerned, while avoiding to take any action that might aggravate the situation or increase the chances of injury or loss of life." In case, where the Rescue Coordination Centre of a *third country* responsible for the search and rescue region does not respond to the information transmitted by the participating unit, the latter shall contact the Rescue Coordination Centre of the host Member State unless that participating unit considers that another internationally recognised Rescue Coordination Centre is better able to assume coordination of the search and rescue situation.

7. Regulations for Radars

Two types of radars are to be deployed in RANGER Project. Regulations for OTH Radar and MIMO Radar are different, and are exposed successively:

7.1. OTH Radar

Regulation of such Over The Horizon Radars are framed by resolution 612 (REV.WRC-12) of ITU (International Telecommunication Union), called “Use of the radiolocation service between 3 and 50 MHz to support oceanographic radar operations”. The main rules HF radars must respect are prescribed here:

- the peak e.i.r.p. of such a radar shall not exceed 25 dBW;
- each radar station shall transmit a station identification (call sign), on the assigned frequency, in international Morse code at manual speed, at the end of each data acquisition cycle, but at an interval of no more than 20 minutes;
- radars should, where applicable, use techniques that allow multiples of such radars to operate on the same frequency, reducing to a minimum the spectral occupancy of a regional or global deployment of radars;
- radars should use directional antennas, where applicable and as required, to facilitate sharing, thereby reducing the e.i.r.p. in the direction of the transmit antenna backlobe;

At last, one of the most restricting point is the necessity to respect the separation distances between a radar and the border of other countries. This distance shall be greater than the distances specified in the following table, unless prior explicit agreements from affected administrations are obtained.

Frequency (MHz)	Land path (km)		Sea or mixed path (km)	
	Rural	Quiet rural	Rural	Quiet Rural
5 (\pm 1 MHz)	120	170	790	920
9 (\pm 1 MHz)	100	130	590	670
13 (\pm 1 MHz)	100	110	480	520
16 (\pm 1 MHz)	80	100	390	450
25 (\pm 3 MHz)	80	100	280	320
42 (\pm 3 MHz)	80	100	200	230

Table 1: Maximum range of OTH radar up to border of another country

7.2 MIMO Radar

The Multiple-Input-Multiple-Output radar of the project is a proximity radar, which coverage typically doesn't exceed 20 km, by transmitting at 3 GHz. This technology is experimental so by the moment, this radar is not considered by an international ITU resolution. So each country

which would install a MIMO radar should contact its affected administration to obtain agreements.

The implementation of such a MIMO radar on BW 3.10-3.25 GHz needs to be conducted in the concerned country of course, but in case of proximity of other country, discussions must also be conducted with affected administration. This procedure typically takes about 3 months.

It is noteworthy that besides technical provisions environmental law and regional conventions may be applied when developing and mounting the radars (see e.g. The Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (1999)). For example, Principle 2 of Rio Declaration on Environment and Development declares “States have ... the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.”³⁹

³⁹ Delfour-Samama & Leboeuf (2014, 1035).

8. Data Management

In EU there are many reporting regimes (e.g. VMS, AIS, LRIT), surveillance systems (SIVE, VTS, CleanSeaNet, etc.) and data sharing mechanisms that exchange maritime monitoring and surveillance data. RANGER has to be compatible with these systems. In addition, RANGER has to meet data protection standards set by European law. This section discusses maritime surveillance framework from “data law” point of view.

Maritime monitoring and surveillance data are currently gathered within and around European waters by a range of agencies for a number of different purposes including fisheries management, the promotion of safe navigation, policing the seas and border and immigration control. Changes in the focus and scope of maritime surveillance over recent years have been accompanied by technological developments that permit the acquisition, processing and exchange of large quantities of data in real time or near real time.

Sharing of maritime monitoring data relating to vessels, individuals and activities can be divided in three different types of scheme:

- reporting regimes where data must be actively reported by a person or vessel;
- surveillance systems where data are gathered in respect of a person or vessel without the active participation of the latter; and
- data sharing mechanisms for the exchange of maritime monitoring and surveillance data.⁴⁰

8.1 Reporting Regimes

Reporting regimes impose a legal reporting obligation. Hence, it is relatively easy to determine what legal rules apply as evidently this must be specified in law.

8.1.1 Vessel Monitoring System (VMS)

In connection with the implementation of the common fisheries policy each Member State is required pursuant to the Control Regulation (EC) 1489/97 and the VMS Regulation (EC) 2244/2003 to establish a VMS whereby data relating to the identification, position, speed and course of its fishing vessels above 15 metres in length can be transmitted at all times by satellite to a Fisheries Monitoring Centre (FMC).

These data include three unique identification numbers: (a) the Community Fleet Register number of each vessel which in turn correlates with details contained in the national fishing boat registers that must be maintained by each Member State; (b) a national register number; and (c) the external or side number of the vessel. In addition, for most vessels, the radio call sign number will be unique. This data is collected to ensure the effective monitoring of the activities of fishing vessels.

Each flag Member State is entitled to receive VMS data through its FMC. In addition a coastal Member State is entitled to receive data from the flag State FMC in respect of a foreign fishing vessel in its waters. The European Commission is also entitled to obtain remote on-line access on specific request. Practice as regards sharing of VMS data at national level beyond the FMC varies among Member States.

8.1.2 Automatic Identification System (AIS)

AIS is a ship-born mechanism that automatically provides for the exchange of data between ships as well as coastal stations. This data includes: (a) fixed data such as the unique Maritime Mobile

⁴⁰ Information in sections 8.1 and 8.2 is based on reports European Commission 2008b; European Commission 2009; and Brooke et al. 2010.

Service Identity (MMSI), call sign and name, IMO number and details of the ship; (b) automatically generated dynamic navigational data including details of the ship's position, course and speed over ground and navigational status; and (c) manually entered voyage data. The rate of data exchange increases as a ship gains speed.

The fitting of AIS is mandatory for all vessels of 300 gross tonnage and above on international voyages, cargo ships of 500 gross tonnage and above and passenger ships irrespective of size.⁴¹ Warships and government owned vessels are exempt. The basic obligation to fit and use AIS is imposed by Regulation 19 of Chapter 19 of the International Convention for the Safety of Life at Sea (SOLAS). Furthermore the Vessel Traffic Monitoring Directive 2002/59/EC⁴² (the 'VTM Directive') requires any ship calling at the port of a Member State to be fitted with AIS. The purposes of AIS include promoting the safety of navigation, collision avoidance, enabling coastal States to obtain information about ships and their cargoes and as a VTS tool (see below).

Implicit in the structure of AIS is that other vessels within transmission range are entitled to AIS data as are the monitoring stations of coastal States. Furthermore the VTM Directive provides for the exchange of AIS data between Member States. In addition, because AIS is transmitted un-encrypted over open frequencies, there is nothing to prevent anyone with suitable equipment from receiving it.

8.1.3 Long Range Identification and Tracking of Ships (LRIT)

Long Range Identification and Tracking (LRIT) is a messaging system for security and SAR purposes that is regulated by IMO through an amendment of SOLAS Chapter V (V/19-1). LRIT is a long-range vessel monitoring system which also requires the periodic transmission of the name and course of vessels. However the data is transmitted only at six hourly intervals and the transmissions take place by satellite meaning that LRIT is a closed system.

The two main distinctions between AIS and LRIT are first that AIS is line of sight while LRIT is global, and second that AIS is broadcast whereas LRIT is only sent to specific recipients for confidential treatment. Furthermore, the AIS message contains much more information, while the possibility for receiving AIS data from satellites provides an attractive option that needs to be further explored also in the EU.

8.1.4 Ship Reporting Systems

Many ship reporting systems are found in European waters. These include: (a) mandatory systems that apply to specific stretches of water; (b) a general obligation to notify information to the authority of the port of destination; and (c) reporting schemes relating to VTS (see below).⁴³

Reporting systems are addressed in Regulation 11 of Chapter V of SOLAS. In addition, Article 4 of the VTM Directive requires the operator, agent or master of a ship bound for an EU port to notify the relevant port authority within a specified time scale: (a) ship identification (name, call sign, IMO or MMSI number); (b) port of destination; (c) estimated time of arrival; and (d) total number of persons on board.

Mandatory ship reporting systems, which in general terms require IMO approval if they involve more than one country, are also addressed in the VTM Directive by reference to the relevant SOLAS provisions. Data to be reported typically include ship identification and type, navigation

⁴¹ Hence, from the maritime surveillance point of view it is noteworthy that not all vessels are obliged to transmit their position.

⁴² Directive 2002/59/EC of European Parliament and Council, 27 June 2002, establishing a Community vessel traffic monitoring and information system (OJ L 208, 5 Aug 2002).

⁴³ One example of ship reporting systems is The West European Tanker Reporting System (WETREP). It is a mandatory ship reporting system for all oil tankers over 600 tonnes DWT carrying heavy types of oils and entering the Western European Particularly Sensitive Sea Area (PSSA).

information (course speed), as well as details of cargo type and the total number of persons on board. In broad terms the purpose of such systems is to promote the safety of navigation and to enable the responsible authorities to respond effectively in the event of an incident.

8.1.5 HAZMAT Reporting

The Competent Authority of the MS needs to be notified by a ship carrying *hazardous materials* (HAZMAT) in case it sets out from an MS port, or plans to go to an MS port. The Hazmat reporting requirements are set out in the VTM Directive and require the prior notification of dangerous or polluting goods carried on vessels departing from Member State ports or entering such ports from outside the Community.

The information to be notified to the designated Member State competent authority includes ‘General Information’ (ship identification, port of destination, estimated departure/arrival times and total number of persons on board) and ‘Cargo Information’ using UN numbers, IMO hazard classes etc.

8.1.6 Incident, Accident and Emergency Reporting

Beyond the duty imposed by Chapter V of SOLAS on the master of every ship to notify every ship it meets of ‘dangerous conditions’, Title III of the VTM Directive imposes a number of reporting requirements concerning incidents and accidents at sea in order to prevent or mitigate any significant threat to maritime safety, the safety of individuals or the environment.

‘Dangerous conditions’, under SOLAS, include dangerous ice, direct dangers to navigation, tropical and other storms but there is no prescribed format for ‘danger messages’.

The incidents and accidents to be reported pursuant to the VTM Directive include any accident affecting the safety of the ship, or shipping safety in general as well as potential and actual pollution incidents. Such data is to be transmitted to the relevant coastal station which must then take appropriate measures to forward/broadcast the information.

Besides these reporting requirements ships are required to maintain many emergency reporting systems. GMDSS (Global Maritime Distress and Safety System) is a system intended to enable communications to/from ships in relation to emergencies. Using ship-mounted equipment and protocols, ships can alert authorities on shore as well as other ships in the vicinity in case of an emergency. Ships can also receive such alert messages, plus SAR information and navigational and weather warning messages. These broadcasts are collectively called Maritime Safety Information (MSI) broadcasts.

Furthermore, IMO’s SOLAS regulation XI-2/5 requires all ships to be provided with a Ship Security Alert System (SSAS). When activated, the SSAS shall initiate and transmit a ship-to-shore security alert to a competent authority designated by the administration, identifying the ship, its location and indicating that the security of the ship is under threat or it has been compromised.

8.1.7 Port Security Notifications

The Port Security Regulation (EC) 725/2004⁴⁴ establishes Community measures to enhance the security of ships used in international trade, domestic shipping and associated port facilities in the face of threats of intentional unlawful acts.

⁴⁴ Regulation (EC) No 725/2004 of the European Parliament and of the Council of 31 March 2004 on enhancing ship and port facility security.

It also seeks to give effect at Community level to measures agreed at the Diplomatic Conference of IMO in 1992 through the addition of a new Chapter XI-2 to SOLAS as well as the adoption of the International Ship and Port Facility Code (ISPS Code).

This complex body of law requires *inter alia* the master of any ship intending to enter a port within the EC to transmit various data to the competent authority for maritime security of the port State concerning, amongst other matters, the security level at which the ship is operating as well as details of the crew, any passengers and the ship's cargo.

8.2 Surveillance Systems and Data Sharing Mechanisms

8.2.1 Vessel Traffic Services (VTS)

Vessel Traffic Services (VTS) are systems intended to establish *maritime safety* in particular areas of dense shipping. VTS are shore based-systems which range from the provision of information messages to the extensive management of maritime traffic. There are two basic types of VTS: (a) port VTS which are concerned primarily with traffic management in/around a port; and (b) coastal VTS which deal with traffic passing through a specific area.

Usually, on entering a VTS area the master of a ship must first report to the authority responsible for the VTS. He must then monitor a specific radio frequency for navigational or other warnings. The activities of a ship within a VTS area are, however, usually monitored by the VTS authority using radar, AIS and in some cases radio direction finders (RDF) and remote video cameras.

In terms of international law the legal regime for VTS is contained in Regulation 12 of SOLAS supplemented by guidelines adopted pursuant to IMO Resolution A.857(20) of 27 November 1997. At EC level, VTS is addressed in Articles 8 and 9(3) of the VTM Directive. The guidelines state that the purpose of VTS is to improve the safety and efficiency of navigation, safety at sea and the protection of the marine environment, offshore installations etc. from possible adverse effects of maritime traffic.

8.2.2 CleanSeaNet

CleanSeaNet is a satellite-based monitoring system for marine oil spill detection and surveillance in European waters provided by the European Maritime Safety Agency (EMSA). EMSA obtains radar satellite images from a commercial satellite provider in response to requests from Member States.

8.2.3 Border Surveillance Systems

Authorities responsible for border control in the Member States have usually national border surveillance systems. For example, in Spain the *Guardia Civil* operates SIVE, a Spanish coastal surveillance system. Originally designed to focus on small vessels carrying illegal immigrants it is used to detect, identify and intercept a range of illegal activities around Spain's maritime frontiers. It is based on a network of fixed stations and mobile units that make use of still cameras, CCTV, radar and infra-red sensors. The data (video images, radar tracks and infra-red images) are transferred by secure internet to provincial control centres. There is no specific legal basis for SIVE – it derives from the basic mandate of the *Guardia Civil*. At present the data is used only by the *Guardia Civil*. As noted, similar systems can be found in almost every EU Member State.

8.2.4 Military Surveillance Systems

The gathering of surveillance data is inherent to the role of Europe's navies for defence purposes, which since 2001, includes defence against terrorism.

Assessing what surveillance data is actually collected is a difficult task: the data itself is usually classified as is information about acquisition mechanisms. Nevertheless it is possible to surmise that maritime surveillance data is gathered through: (a) physical observation from military vessels and aircraft; (b) unmanned vehicles and drones; (c) remote sensing; (d) coastal radars; and (e) underwater sensors. As will be seen below Europe’s navies typically also make use of civilian monitoring and surveillance data.

8.2.5 Data Sharing Mechanism

A range of mechanisms currently exists for sharing maritime monitoring and surveillance data at national and international level. While some national level mechanisms enable the sharing of data among different agencies for a range of different purposes, at the international level such mechanisms are single purpose. Besides *national* data sharing mechanisms (like French SPATIONAV) there are *regional* data sharing agreements. For example, the HELCOM AIS Network enables the real time sharing of AIS data among the parties to the 1992 Helsinki Convention (Denmark, Estonia, EC, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden) and Norway. *SafeSeaNet* is a data exchange system, based on an index server, developed by EMSA to support the implementation of elements of the VTM Directive (relating to port, HAZMAT, ship and alert notifications). *SafeSeaNet* is not specifically referred to in the VTM Directive although some of the reporting requirements are. Then there are *commercial* AIS sharing mechanisms as well as data sharing arrangements for different *purposes* like MAOC-N⁴⁵ and V-RMTV⁴⁶.

8.3 Data Protection

EU law including EU border law contains provisions on information exchange and data protection. Exchange of information has been discussed in Section 4 Management of external Borders. This section will focus on data protection issue. It is noteworthy that other regulations which are relevant in the context of EU border control (e.g. SIS, VIS, EURODAC) will not be discussed due to they do not provide any contextual added-value for the use of radars in maritime surveillance. Another restriction concerns the focus on border control in general. This chapter therefore does not look at the protection of data related to prevention, investigation, detection or prosecution of criminal offences which may be applicable to cases detected in the context of border surveillance.⁴⁷ Finally, this section will discuss on data sharing if the data involves *personal data*, in which case data protection laws will, in principle, apply.

⁴⁵ MAOC-N, which is based in Lisbon, is a law enforcement centre that coordinates the maritime interdiction of illegal drugs trafficked on the high seas. It was established in 2007 on the basis of an agreement between Ireland, the Netherlands, Spain, Italy, Portugal, France and the UK. Data is gathered from a range of sources including AIS and classified intelligence.

⁴⁶ The V-RMTC is a virtual network connecting the operational centres of a number of navies that enables the sharing via internet of unclassified information on merchant shipping. Coordinated by the Italian Navy, it was established in 2006 pursuant to an Operational Agreement between some 15 countries with naval interests in the Mediterranean.

⁴⁷ Council Framework Decision 2008/977/JHA of 27 November 2008 on the protection of personal data processed in the framework of police and judicial cooperation in criminal matters. It is repealed with Directive (EU) 2016/680 of the European Parliament and of the Council of 24 April 2016 on the protection of natural persons with regard to the processing of personal data by competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, and of the free movement of such data, and repealing Council Framework Decision 2008/977/JHA.

The two main instruments of EC data protection law are the Data Protection Directive 95/46/EC⁴⁸ and the Data Protection Regulation 45/2001/EC⁴⁹. The Data Protection Directive seeks to enable the free flow of data between Member States, by harmonising national rules, while at the same time ensuring that the fundamental rights of individuals, notably the right to privacy, are protected with regard to the processing of data. The Data Protection Regulation seeks to apply the same basic principles to Community institutions. In addition, European border law described in section 4 contains some provisions on data protection. For example, pursuant to Article 45 of Regulation (EU) 2016/1624 “The Agency shall apply Regulation (EC) No 45/2001 when processing personal data.”

In the light of the legislation, it is not entirely unambiguous what data protection rules shall be respected in the field of border control. On the one hand, pursuant to Article 3 of Data Protection Directive 95/46/EC it shall not apply to the processing of personal data in operations concerning public security, defence, State security and the activities of the State in areas of criminal law. Then again, Article 13 of EUROSUR Regulation (EU) No 1052/2013 stipulates “Where the national situational picture is used for the processing of personal data, those data shall be processed in accordance with Directive 95/46/EC, Framework Decision 2008/977/JHA⁵⁰ and the relevant national provisions on data protection.” Furthermore, Regulation (EU) 2016/1624 stipulates in Article 44 that exchange of personal data during joint operations, pilot projects, rapid border interventions, by migration management support teams, return operations and return interventions, and in the framework of EUROSUR, shall be done in accordance with Council Decision 2013/488/EU⁵¹ and Commission Decision (EU, Euratom) 2015/444⁵².

The concept of ‘personal data’ is very broadly defined in the Data Protection Directive. In outline it means any information relating to an identified or identifiable *natural person*. An ‘identifiable person’ is further defined as one who can be identified directly or indirectly by reference to an identification number or one or more factors specific to his physiological, mental, economic, cultural or social identity. Although this broad definition has led to some uncertainty, particular items of information such as a telephone number, car registration number, social security number or passport number can be sufficient to render someone directly or indirectly identifiable and thus may, in the context of a particular situation, amount to personal data. Furthermore, in certain circumstances information on *legal persons* may also amount to personal data, for example where the name of a legal person derives from that of a natural person.

Consequently while it seems reasonable to conclude that the name of a vessel may not as such be sufficient to directly identify a (natural) person owning a vessel the unique combination of the vessel name with other data elements, such as a unique vessel registration number, that enable the identification of a single person (vessel owner, captain, crew *etc.*) may amount to personal data. Furthermore, pictures, including CCTV images and other visual data may also be considered personal data if they permit the identification of a natural person. In EUROSUR

⁴⁸ Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data. Directive 95/46/EC is repealed with Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). Regulation (EU) 2016/679 enters into force from 25 May 2018.

⁴⁹ Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data.

⁵⁰ See endnote 38.

⁵¹ Council Decision 2013/488/EU of 23 September 2013 on the security rules for protecting EU classified information.

⁵² Commission Decision (EU, Euratom) 2015/444 of 13 March 2015 on the security rules for protecting EU classified information.

Regulation No (EU) 1053/2013 ship identification number is regarded as personal data (see Article 13.2).

Taking the above into account, analysis of the maritime monitoring and surveillance data described above leads to the conclusion that they could potentially involve personal data (*e.g.* where data concerns a vessel identification number, a licence number or external registration number or other unique identifiers that can lead directly or indirectly to the identification of a natural person). While in the large majority of cases the owner or agent of a vessel will be a legal person this may not always necessarily be the case. Various references made in the legal instruments described in this report suggest that data protection concerns were taken into account from the outset.

In addition to the broad concept of personal data the definition of the ‘processing of personal data’ is equally broad and basically covers any type of manipulation of data that can be considered personal data. ‘Processing’ is defined by both the Data Protection Directive and the Data Protection Regulation as ‘any operation or set of operations which is performed upon personal data, whether or not by automatic means, such as collection, recording, organization, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, blocking, erasure or destruction’.

Data protection law establishes principles relating to processing of personal data and data quality. Personal data shall be:

- processed fairly and lawfully;
- collected for specified, explicit and legitimate purposes and not further processed in a way incompatible with those purposes;
- adequate, relevant and not excessive in relation to the purposes for which they are collected and/or further processed;
- accurate and up to date;
- kept in a form which permits identification of data subjects for no longer than is necessary.⁵³

Above mentioned principles may be regarded as the main restrictions on the sharing of such data pursuant to data protection law. First of all, the processing of personal data needs to be legitimate. The Data Protection Directive and Regulation define the grounds for such legitimacy, including if the processing is in the public interest or in the exercise of official authority.

The *purpose-limitation* is one of the cornerstones of data protection law: personal data can only be processed for specified, explicit and legitimate purposes and not further processed in a way incompatible with those purposes. In addition, the processing of personal data must be adequate, relevant and not excessive in relation to the purposes for which they are collected and/or further processed (*principle of proportionality*). Regarding the functioning of European Border and Coast Guard, legitimate purposes of processing of personal data are exhaustively listed in Regulation (EU) 2016/1624. Pursuant to Article 46 Frontex may process personal data only for the following purposes:

- performing its tasks of organising and coordinating joint operations, pilot projects, rapid border interventions, and in the framework of the migration management support teams;
- performing its tasks of organising and coordinating return operations and return interventions;
- facilitating the exchange of information with Member States, EASO, Europol or Eurojust;
- risk analysis;

⁵³ See Directive 95/46/EC, Article 6; Regulation (EC) No 45/2001, Article 4; Regulation (EU) 2016/679, Article 5.

- identifying and tracking vessels in the framework of EUROSUR;
- administrative tasks.⁵⁴

Personal data can therefore, in principle, not be processed for purposes other than the purposes for which they were collected. A clear and precise description of the purposes of the data processing is therefore of crucial importance. From the perspective of data protection law, the processing of personal data needs to remain restricted to: (i) the competent authorities or organisations designated for such processing; and (ii) the purposes laid down by the relevant laws or regulations that allow (or impose) the processing.

A number of examples of the purpose-limitation for data processing can also be found in the maritime sector legislation described in this report. The overall effect is that data collected and processed by a certain authority with a specific purpose cannot then be used for a different purpose just by virtue of the different, possibly broader, competence of the receiving authority. In other words the purpose of the processing of data is therefore of crucial importance. The purpose limitation has other impacts including as regards storage or retention: personal data may not be kept in a form that permits the identification of data subjects for longer than is necessary for the purpose for which the data were collected or for which they are further processed. It follows that data collected for one purpose must be deleted as soon as that purpose is fulfilled.

As regards data sharing another important principle of data protection law is that data may not be transmitted to recipients outside the European Economic Area (EEA) which do not ensure an adequate level of protection. Very few non-EEA countries currently meet these criteria. However data transfers outside the EEA may take place if adequate safeguards are put in place as a result *inter alia* of appropriate contractual arrangements. On the other hand, the disclosure of information to third parties may have been prohibited by law. Pursuant to Article 45 of Regulation (EU) 2016/1624 the transfer of personal data processed by Frontex and the onward transfer by Member States to authorities of third countries or third parties, including international organisations, shall be prohibited.

Data protection principles demonstrate that data protection law sets special requirements for the quality of data. Furthermore, Council Decision 2013/488/EU and Commission Decision 2015/444 stipulates protection of EU Classified Information (EUCI) handled in communication and information systems. Pursuant to Article 10 of Council Decision 2013/488/EU effective Information Assurance (IA) shall ensure appropriate levels of *confidentiality, integrity, availability, non-repudiation* and *authenticity*.⁵⁵ IA shall be based on a risk management process. The Commission's Decision 2015/444 in turn provides basic principles of Information Assurance. Pursuant to Article 34 Information Assurance in the field of communication and information systems is the confidence that such systems will protect the information they handle and will function as they need to, when they need to, under the control of legitimate users. Effective Information Assurance shall ensure appropriate levels of:

- *Authenticity*: the guarantee that information is genuine and from *bona fide* sources;
- *Availability*: the property of being accessible and usable upon request by an authorised entity;
- *Confidentiality*: the property that information is not disclosed to unauthorised individuals, entities or processes;
- *Integrity*: the property of safeguarding the accuracy and completeness of assets and information;

⁵⁴ Articles 47-49 and 11 of Regulation (EU) 2016/1624 stipulates in details what personal data may be collected within purposes listed in Article 46.

⁵⁵ European border law also contains similar regulations. Pursuant to Article 18.4 of EUROSUR Regulation (EU) No 1052/2013 information shall fulfil the criteria of availability, confidentiality and integrity.

- *Non-repudiation*: the ability to prove an action or event has taken place, so that this event or action cannot subsequently be denied.

Finally, personal data is protected by maintaining as short a retention time as possible for keeping the data. As discussed above, Regulation (EU) 2016/1624 stipulates processing of personal data collected during joint operations, pilot projects, rapid border interventions, etc. Pursuant to Article 47.3 personal data shall be deleted as soon as they have been transmitted to EASO, Europol or Eurojust or to the competent authorities of Member States or used for the preparation of risk analyses. The storage period shall, in any event, not exceed 90 days after the date of the collection of those data. In the results of risk analyses, data shall be anonymised. Furthermore, processing of personal data in the context of return operations and return interventions is limited. Pursuant to Article 48.3 personal data shall be deleted as soon as the purpose for which they have been collected has been achieved and no later than 30 days after the end of the return operation or the return intervention.⁵⁶

Data protection law also: imposes a duty on controllers of personal data to implement adequate security measures and to keep such data confidential; and confers certain rights on data subjects (such as the right to access and consult the data, the right to request rectification of inaccurate data, and the ‘right to be forgotten’). In the same way, it needs to be clearly defined who is the data controller, *i.e.* the person responsible for the processing of the data and thus for compliance with data protection law.

Finally it is important to note that data protection legislation does not automatically apply to the processing of all personal data. Exceptions include the processing of personal data in the course of an activity that falls outside EC law (*e.g.* second and third pillar activities such as the common foreign and security policy and police and judicial cooperation in criminal matters) as well as processing operations concerning public security, defence, State security and the activities of the State in areas of criminal law (although there is currently a proposal to regulate the processing of personal for third pillar activities).

⁵⁶ Besides short retention time personal data is protected through anonymization and pseudonymisation. See *e.g.* Regulation (EU) 2016/1624 and Directive (EU) 2016/680.

9. Conclusions

This section reports the most important aspects of maritime surveillance based on numerous legal orders regulating maritime domain. Besides other RANGER project reports (e.g. D2.4 Gap Analysis, D2.5 RANGER System Requirements) this document provides important information to guide RANGER radar development to tackle the most pressing challenges in maritime surveillance.

Maritime surveillance is a law enforcement function regulated by international, European and national law. Laws define the duties and powers of the authorities. In addition, international organizations (e.g. IMO, IALA) have agreed on numerous standards and procedures to be followed in maritime domain.

Study of various legal regimes affecting maritime surveillance have demonstrated the complexity of multilayer systems, where national, European (i.e. supranational) and international legislation and administration are intertwined. In practice, it means that the applicable norms may make different interpretations possible.

Several international law instruments are relevant when considering illegal immigration across maritime borders and maritime surveillance, in particular of the United Nations Convention on the Law of the Sea (UNCLOS). In Europe, maritime border surveillance has been regulated by numerous European legal instruments such as Schengen Borders Code (SBC), EUROSUR Regulation (1052/2013) and regulations of European Border and Coast Guard (2016/1624) and surveillance of external sea borders (656/2014). At all times, states are also obliged to respect human rights and the rights of refugees that are protected by international and regional agreements.⁵⁷

Surveillance of maritime areas are limited by a diverse set of rules in different maritime zones. As a rule, coastal states have sovereignty over their territorial sea. Despite the universally applicable right of innocent passage, coastal states have the right to prevent the passage of ships transporting illegal immigrants through their territorial waters.⁵⁸ To a large extent, this also applies to contiguous waters.⁵⁹ On high seas, due to the basic principles of the freedom of navigation and the extensive jurisdiction of the flag state, other states cannot, in principle, intervene against ships carrying illegal immigrants.⁶⁰ Exceptions to the rule of flag state jurisdiction are made in cases of piracy, transport of slaves, and non-authorized radio emissions, but no exception is made for the transport of illegal immigrants.⁶¹ *Flagless ships, often used by illegal immigrants trying to enter the EU, do not invoke freedom of navigation on the high seas and can be intercepted by any state.*⁶²

⁵⁷ E.g., International Covenant on Civil and Political Rights of December 1966; European Convention on Human Rights and Fundamental Freedoms of 1950; Convention relating to the Status of Refugees of 28 July 1951; Protocol relating to the Status of Refugees of 31 January 1967.

⁵⁸ UNCLOS, Article 25(1): “The coastal State may take the necessary steps in its territorial sea to prevent passage which is not innocent”; Id., Article 19(1): “Passage is innocent so long as it is not prejudicial to the peace, good order or security of the coastal State ...”; Id., Article 19(2g): “Passage of a foreign ship shall be considered to be prejudicial to the peace, good order or security of the coastal State if in the territorial sea it engages in ... the loading or unloading of any commodity, currency or person contrary to the customs, fiscal, immigration or sanitary laws and regulations of the coastal State.”

⁵⁹ Id., Article 33(1a): “In a zone contiguous to its territorial sea, described as the contiguous zone, the coastal State may exercise the control necessary to ... prevent infringement of its customs, fiscal, immigration or sanitary laws and regulations within its territory or territorial sea.”

⁶⁰ Id., Article 87, freedom of the high seas; Article 92(1): “Ships shall sail under the flag of one State only and ... shall be subject to its exclusive jurisdiction on the high seas.”

⁶¹ Id., Articles 99-110.

⁶² Id., Article 110(1d).

Regarding search and rescue (SAR) ships are bound by the obligation to rescue and render assistance to any person or ship in distress at sea (*duty of care*). This applies in all cases, including the transport of illegal immigrants, and can be abused if immigrants are intentionally left in distress. Such transport usually takes place in worn-out large ships that fly under a flag of convenience and are run by criminal organisations.

Illegal immigration by sea is often related to smuggling. The Protocol Against the Smuggling of Migrants by Land, Air and Sea, supplementing the United Nations Convention against Transnational Organised Crime, addresses this issue. The Protocol promotes cooperation among state parties and urges them to take legislative and other measures to prevent smuggling. It proposes specific measures against smuggling of migrants by sea, which are mainly aimed at enhancing cooperation between the states “to the fullest extent possible.”⁶³

Maritime border control is law enforcement function. It poses specific challenges to *information security*. Privacy in the *processing of personal data* should also be taken into account even though general data protection law will in principle not apply.⁶⁴ From data management point of view these are the two most important issues to be taken into account when developing RANGER radars.

Information security has been defined in the Commission’s Decision 2015/444. Effective Information Assurance shall ensure appropriate levels of:

- *Authenticity*: the guarantee that information is genuine and from *bona fide* sources;
- *Availability*: the property of being accessible and usable upon request by an authorised entity;
- *Confidentiality*: the property that information is not disclosed to unauthorised individuals, entities or processes;
- *Integrity*: the property of safeguarding the accuracy and completeness of assets and information;
- *Non-repudiation*: the ability to prove an action or event has taken place, so that this event or action cannot subsequently be denied.

In certain circumstances - specified by law - personal data may be processed during maritime border surveillance. Based on border control related legal initiatives (e.g. ETIAS) the need for processing of personal data may even increase in the future. Hence, it is highly important that RANGER solutions for data management facilitates processing of different kind of data.

Legal framework for maritime border surveillance contributed by RANGER can be summarized as follows in Table 2.

⁶³ To support the Protocol, the Council of the European Union adopted a Decision to further promote cooperation and information sharing among the EU Member States that are parties to the Protocol. See Council Decision of 24 July 2006 on the conclusion, on behalf of the European Community of the *Protocol Against the Smuggling of Migrants by Land, Sea and Air*, supplementing the United Nations *Convention Against Transnational Organised Crime* concerning the provisions of the Protocol, in so far as the provisions of this Protocol fall within the scope of Articles 179 and 181(a) of the *Treaty establishing the European Community*, 2006/616/EC. The Decision is not binding on the United Kingdom, Ireland or Denmark.

⁶⁴ When RANGER radars are used as stand-alone systems for SAR purposes general Data Protection Law shall be applied.

Activity	Scope	Applicable law ⁶⁵	Remarks
Maritime border surveillance by radars	Territorial waters, contiguous zone, EEZ	UNCLOS	No limitations.
Search and rescue	Duty of care	SAR Convention, SOLAS Convention, Regulation (EU) No 656/2014, Art. 9.	Responsibility of national SAR authorities. EU Member States shall render assistance during border surveillance operations.
Data Collection	Integrated border management	Regulation EU (No) 2016/1624, Art. 4 and 8.	Tasks of European Border and Coast Guard (EBCG).
Collection of personal data	Varies based on EBCG operation	Regulation (EC) No 45/2001, Art. 4. Regulation EU (No) 2016/1624, Art. 45 - 50. Regulation (EU) No 656/2014, Art. 4. Directive 95/46/EC. ⁶⁶ Council Framework Decision 2008/977/JHA. ⁶⁷	Data quality (lawfulness, purpose limitation, accuracy, proportionality, etc.).
Data processing	Information assurance: <ul style="list-style-type: none"> - Authenticity - Availability - Confidentiality - Integrity - Non-repudiation 	Council Decision 2013/488/EU, Art. 10. Commission decision 2015/444, Art. 34.	Processing of personal data for only SAR purposes (e.g. RANGER radars used as stand-alone systems) may be restricted and shall be pursuant to Regulation (EU) 2016/679.
Data exchange	<ul style="list-style-type: none"> - Migratory flows - Risk analysis - Vulnerability assessment 	Regulation EU (No) 2016/1624, Art. 10, 45 – 50. Regulation (EU) No 656/2014, Art. 4.	Exchange of personal data with third countries and/or third parties may be prohibited/limited.

Table 2: Legal framework for maritime border surveillance

⁶⁵ Only the most important legal instruments and provisions have been mentioned. Besides international conventions and EU law these matters are without exception also regulated by national law.

⁶⁶ Directive 95/46/EC is repealed with Regulation (EU) 2016/679 with effect from 25 May 2018.

⁶⁷ Framework Decision 2008/977/JHA is repealed with Directive (EU) 2016/680 with effect from 6 May 2018.

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Annex B – List of Acronyms

Acronym	Meaning
Art.	Article
ATR	Automatic Target Recognition
BW	Bandwidth
CPIP	Common Pre-Frontier Intelligence Picture
DoW	Description of Work
DWT	Dead weight
EBCG	European Border and Coast Guard
ECN	EUROSUR Communication Network
EEZ	Exclusive Economic Zone
EFS	EUROSUR Fusion Services
EIRP e.i.r.p.	Effective Isotropic Radiated Power
EMSA	European Maritime Safety Agency
ESP	European Situational Picture
EU	European Union
EUCI	EU Classified Information
EUROSUR	European Border Surveillance System
EWE	Early Warning Engine
EWS	Early Warning System
FMC	Fisheries Monitoring Centre
GMDSS	Global Maritime Distress and Safety System
GUI	Graphical User Interface
HMI	Human Machine Interface
IA	Information Assurance
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
IMO	International Maritime Organization
ISO	International Organization for Standardization
ITU	International Telecommunication Union
LRIT	Long Range Identification and Tracking of Ships
MIMO	Multiple Input Multiple Output (Radar)
MLA	Machine Learning Algorithm
MMSI	Maritime Mobile Service Identity
MS	Member State
MSI	Maritime Safety Information
MSS	Maritime Security Strategy
NCC	National Coordination Centre
NM	Nautical Mile
NSP	National Situational Picture
OTH	Over-The-Horizon (Radar)

PA-MIMO	Photonics Assisted Multiple Input Multiple Output (Radar)
PSSA	Particularly Sensitive Sea Area
RCC	Rescue Coordination Centre
SAR	Search and Rescue
SSAS	Ship Security Alert System
SAT CEN	Satellite Centre
TOCC	Transnational Organized Crime Convention
UNCLOS	United Nation Convention on the Law of the Sea
VMS	Vessel Monitoring System
VTS	Vessel Traffic Service