Agreement between Communications Authorities of Sweden and the Republic of Poland

concerning the offshore use of the following frequency bands:

700 MHz (694-790 MHz),

800 MHz (790-862 MHz),

900 MHz (880-960 MHz),

1500 MHz (1452-1492 MHz),

1800 MHz (1710-1880 MHz),

2100 MHz (1920-2170 MHz),

2600 MHz (2500-2690 MHz),

3600 MHz (3400-3800 MHz)

for wideband systems capable of providing terrestrial electronic communications services that are deployed offshore in the border areas of exclusive economic zones

2025

1 Introduction

1.1 This coordination agreement regards civil mobile wideband communication networks operating on fixed offshore installations in the border areas of exclusive economic zones (EEZ)[1] as defined in United Nations Convention on the Law of the Sea (UNCLOS) in Baltic Sea Area.

1.2 The Communication Authority of Sweden is Swedish Post and Telecom Authority.

1.3 The Communication Authority of the Republic of Poland is Office of Electronic Communications.

2 Principles and definitions

2.1 The 700 MHz-band covers the frequencies from 694 to 790 MHz with the Frequency Division Duplex (FDD) arrangement (703-733 MHz uplink, 758-788 MHz downlink), excluding Supplemental Downlink (SDL, 738-758 MHz in the duplex gap), according to ECC Decision (15)01.

2.2 The 800 MHz-band covers the frequencies from 790 to 862 MHz with the Frequency Division Duplex (FDD) arrangement (791-821 MHz downlink, 832-862 MHz uplink), according to ECC Decision (09)03.

2.3 The 900 MHz-band covers the frequencies from 880 to 960 MHz with the Frequency Division Duplex (FDD) arrangement (880-915 MHz uplink, 925-960 MHz downlink), according to ECC Decision (06)13.

2.4 The 1500 MHz-band covers the frequencies from 1427 to 1517 MHz for SDL, according to ECC Decision (13)03 and ECC Decision (17)06, this agreement is only for the central part of the band, i.e. 1452-1492 MHz.

2.5 The 1800 MHz-band covers the frequencies from 1710 to 1880 MHz with the Frequency Division Duplex (FDD) arrangement (1710-1785 MHz uplink, 1805-1880 MHz downlink), according to ECC Decision (06)13.

2.6 The 2100 MHz-band covers the frequencies from 1920 to 2170 MHz with the Frequency Division Duplex (FDD) arrangement (1920-1980 MHz uplink, 2110-2170 MHz downlink), according to ECC Decision (06)01.

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[1] The exclusive economic zones start at 12 nautical miles (22.224 km) from the coastline.

2.7 The 2600 MHz-band covers the frequencies from 2500 MHz to 2690 MHz with the FDD arrangement (2500-2570 MHz uplink, 2620-2690 MHz downlink) and 2570 MHz to 2620 MHz for SDL or Time Division Duplex (TDD), according to ECC Decision (05)05.

2.8 The 3600 MHz-band covers the frequencies from 3400 MHz to 3800 MHz with Time Division Duplex (TDD) arrangement, according to ECC Decision (11)06.

2.9 This agreement is based on the concept of field strength levels and preferential Physical-layer Cell Identities (PCIs), when LTE or 5G NR is used, as defined in Table 2, Annex 1. Preferential PCIs shall be used in border areas to improve coverage and service when channel center frequencies are aligned.

2.10 This agreement covers the coordination of base stations. User equipment, or terminals, are allowed to be used on non-interfering basis, in accordance with ITU RR 4.4.

2.11 All frequency bands subject to this agreement are currently used or will be used in the future in both countries (inside administrative borders) by nationwide operators (MNOs). For both offshore installations in EEZs and MNOs, the frequencies will be used by MFCN systems. The administrations of both countries will make every effort to avoid mutual interference between nationwide networks MNOs and their offshore EEZs installations of the same country. This will also avoid interference between Swedish and Polish networks.

3 Use of frequencies in the EEZ border areas between Sweden and the Republic of Poland

3.1 The coordination threshold in this agreement is based on the concept of field strength level of 5 MHz block assignment

3.2 In case of other frequency block sizes, a value of the following formula should be added to the field strength values:

$$A = 10 * \log \frac{frequency\ block\ size\ [MHz]}{5\ MHz}\ [dB]$$

3.3 For field strength calculations the latest version of Recommendation ITU-R P.1546 "Method for point-to-area predictions for terrestrial services in the frequency range 30-4000 MHz" shall be used.

3.4 The field strength values in this agreement are based on a receiving antenna height of 3 m (above mean sea level), 10% of the time and 50% of the locations.

3.5 The respective bands may be used without coordination between the countries being party to this agreement if the predicted field strength produced by a base station does not exceed the threshold for the respective frequency band, at the border of the EEZ areas, see Table 1 below and Figure 1 in Annex 1:

Table 1 Threshold for electric field strength at the border of the EZZ areas between Sweden and the Republic of Poland.

Frequency band [MHz]	Threshold @border of EEZ areas [dBµV/m/5 MHz]		
	Synchronisation signal centre frequencies aligned		Synchronisation signal centre frequencies not aligned
	Preferential PCIs	Non-preferential PCIs	All PCIs
700	59	41	59
800	59	41	59
900	59	41	59
1500	65	47	65
1800	65	47	65
2100	65	37	65
2600	65 for FDD and synchronised TDD operation 30 for unsynchronised TDD operation	49 for FDD and synchronised TDD operation 30 for unsynchronised TDD operation	65 for FDD and synchronised TDD operation 30 for unsynchronised TDD operation
3600	79 for synchronised TDD operation 15 for unsynchronised TDD operation	61 for synchronised TDD operation 15 for unsynchronised TDD operation	79 for synchronised operation 15 for unsynchronised TDD operation

4 Individual operator agreements

4.1 Establishment of arrangements between operators shall be encouraged to the extent possible. Subject to agreement between operators other technical characteristics can be used, e.g. other field strength limits or propagation models. Such arrangements are subject to consent of the administrations concerned. In particular, before giving consent to such arrangements, the administrations concerned should take care that all network operators concerned are parties in such an arrangement.

4.2 Any case of interference shall as far as possible be resolved among the operators concerned. If not resolved, assistance might be sought from the administrations.

5 Revision and cancellation

5.1 This agreement may by revised upon request of any Administration with the consent of the other Administration.

5.2 Any Administration is entitled to withdraw from this Agreement with a notice of at least six months.

6 Entry into force

6.1 This agreement shall enter into force from the 2025 01 28.

6.2 This agreement has been drawn up in two identical copies, one for each Administration.

Done by correspondence

For the Communication Authority of the Republic of Poland

Warszawa, 25.01.2025 r.

Place Date

Paweł Krzymiński

Paweł Krzymiński,
Director of Department of Radio Spectrum

For the Communication Authority of Sweden

Place Date

Farshad Moradi,
Head of Section Spectrum Development

Annex 1

Allocation of preferential Physical-layer Cell Identities (PCIs) for LTE and 5G NR in 700 MHz, 800 MHz, 900 MHz, 1500 MHz, 1800 MHz, 2100 MHz, 2600 MHz and 3600 MHz frequency bands

Table 2 sub-sets for LTE and NR for use in border areas.

Set	A	B	C	D	E	F
PCIs for LTE	0..83	84..167	168..251	252..335	336..419	420..503
PCIs for NR	0..83 504..587	84..167 588..671	168..251 672..755	252..335 756..839	336..419 840..922	420..503 923..1007
Set preferential to[2]	-	-	-	-	POL[3]	S[4]

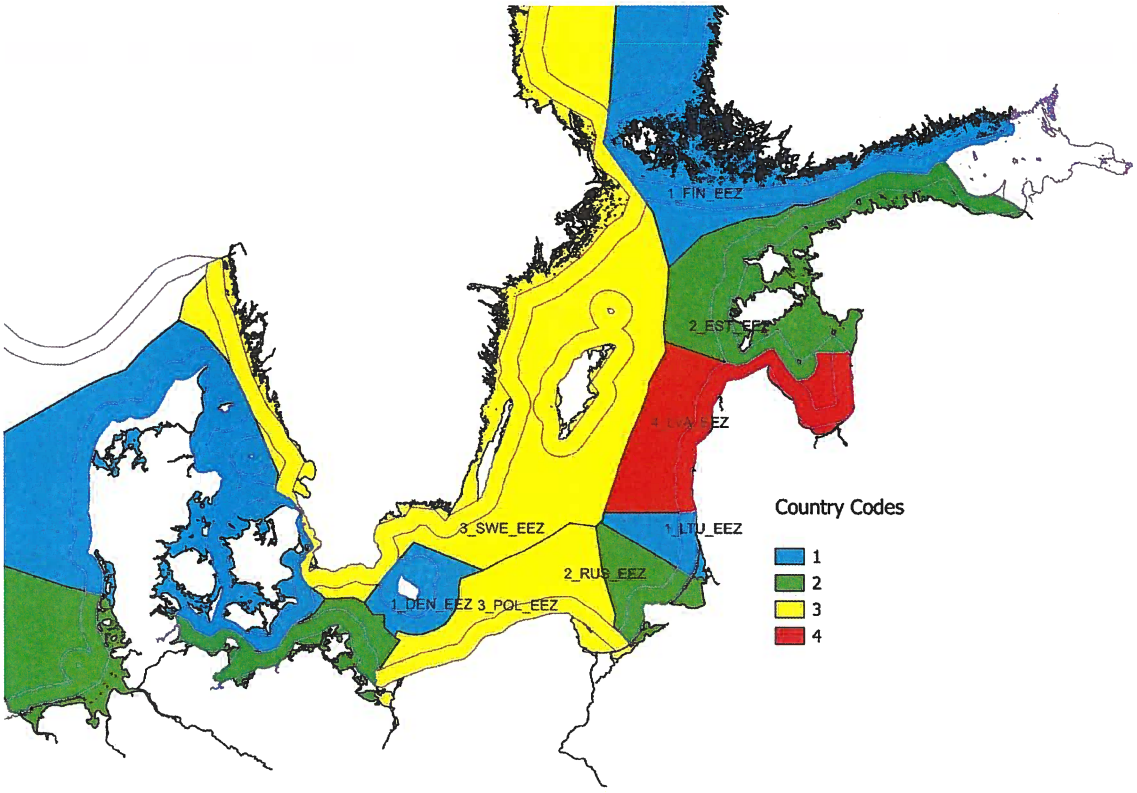

Figure 1 Exclusive Economic Zone borders.

[2] preferential PCIs to one Party are non-preferential to the other Party.
[3] POL – Republic of Poland.
[4] S – Sweden.