



Ministero dello Sviluppo Economico



Stato Città del Vaticano



Gouvernement Princier
PRINCIPAUTÉ DE MONACO
Département de l'Équipement, de
l'Environnement et de l'Urbanisme
Direction des Communications Electroniques

Agreement between the Competent Administrations of France, Italy, Monaco and Vatican City State concerning frequency co-ordination of Digital Terrestrial Television in the band 470-694 MHz

1. Introduction

This Agreement facilitates the mutual clearance of the terrestrial broadcasting services from the 694 MHz – 790 MHz band (“700 MHz band”) by defining a new agreed frequency plan for Digital Terrestrial Television (DTT) in the 470-694 MHz band.

On the 30th of June 2022, this Agreement will revoke and replace the “Agreement between the Administrations of France and Italy on modifications of the GE06 Plan for the band 470-862 MHz” signed on the 7th of April 2010, and the GE06 plan entries inside the coordination zone as defined in Annex 1.

This Agreement, concerning exclusively technical aspects on UHF band, shall not prejudice nor replace the “Agreement between the Holy See, acting also in the name and on behalf of the Vatican City State, and the Government of the Italian Republic, of the 14th and 15th of June 2010” concerning the use of certain broadcasting frequencies.

This Agreement is the result of several meetings done in a cooperative spirit in order to define an acceptable solution for all the signatory Administrations hereinafter “the Signatory Administrations”. The background of the definition of the new plan is described in Annex 2.

2. Coordination zone

The coordination zone between the Signatory Administrations is described in Annex 1.

This Agreement describes the Signatory Administrations new understanding concerning the exercise of their respective rights in the coordination zone in terms of assignments and allotments between the Signatory Administrations for the implementation of the DTT plan within the band 470-694 MHz.

3. Exclusive zone

The exclusive zone is part of the coordination zone as illustrated in Annex 1.

In the exclusive zone, the Signatory Administrations will register in the GE06 Plan and use assignments using the exclusive channels and the shared channels according to Annex 2 with the agreed technical conditions as described in Annexes 3 and 4.

The conditions on the use of the shared channels between Italy and Monaco are described in Annex 3.

The conditions on the use of the shared channels between Vatican City State and France are described in Annex 4.

4. Allotments

Allotment shapes are described in annexes 5, 6, 7 and 8 and represent the service area of the stations. They do not provide rights for new assignments but define areas where protection is needed.

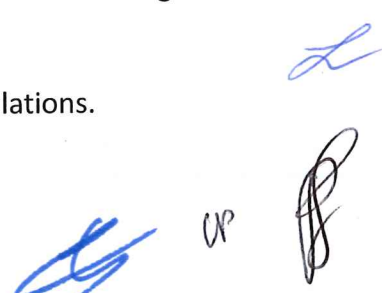
5. Assignments

For the assignments **inside the coordination** zone:

- **Inside the exclusive zone**, the exclusive and the shared channels can be registered in the GE06 plan and used according to the conditions mentioned in §3.
- **Outside the exclusive zone**, the generic characteristics of the assignments described in annexes 9 and 10 are agreed. In these specific conditions all the channels between 21 and 48 can be registered to the GE06 Plan with the agreement of the other administrations and used.

Assignment **outside the coordination zone** will be coordinated under the GE06 Agreement and should normally be agreed.

Any request will be studied by the other administrations using C/I calculations.



Additional assignments or technical characteristics for which coordination is necessary under the GE06 Agreement conditions and not in line with annexes 2, 3, 4, 9 and 10 must be formally coordinated and agreed by all the Signatory Administrations.

6. Calculations method

The field strength prediction model to be used to calculate the field strength is ITU-R 526 or ITU-R 1812-1% of time, with a resolution of 100m for the case of terrestrial path or ITU-R 1546 1% of time for the maritime path.

7. Transitory period

The Signatory Administrations recognize the necessity for a transition period and will agree on the final date of the implementation within the coordination zone which should be before 30th June 2022.

France will release the 700 MHz band in Corse and Côte d'Azur before the end of 2017 and will be in line with the agreement in the entire coordination zone before the 1st of July 2019.

Monaco will be in line with the agreement before the end of 2017.

Vatican City State will be in line with the agreement before the 30th of June 2022.

Italy will switch off the channels 50 to 53 in the exclusive zone before the 1st of June 2020 and will be in line with the agreement before the 30th of June 2022 on the basis of the national roadmap that will be approved before the 30th of June 2018. In order to achieve the release of the channels 50 to 53 (corresponding to the uplink part of the 2x30 MHz mobile plan) and to be in accordance with this Agreement, Italy expects to use transitional channels during the transitory period.

Monaco can use the channels 35 and 30 and Italy will respect the threshold for these channels on all the test points as described in Annex 3, six months after the signature of the Agreement.

The details of the use of transitory channels in the dedicated period will be part of an additional agreement which should be done at least before the migration if needed or before 2020 if appropriate.

Each Signatory Administration shall inform the others two months before any change in the use of allotments takes place.

8. Review of the Agreement

With the consent of the other Signatory Administrations, this Agreement may be modified upon request of one of the Signatory Administrations where such a modification becomes necessary in the light of administrative, regulatory or technical developments. A Signatory Administration cannot withdraw unilaterally from this Agreement.

9. Language of the Agreement

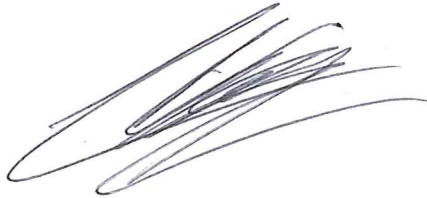
This Agreement is signed in four original versions in English. Each Signatory Administration has one of the versions.

10. Entry into force

This Agreement shall enter into force on the date of the last signature.

Done in Rome, 26th of September 2017

For the Administration of France



Date : 26/09/2017
Cédric Perros
For the Administration of Monaco

For the Administration of Italy



Date : 26/9/2017
Eva Spina
For the Administration of Vatican City State



Date : 07/12/2017
Christophe Pierre

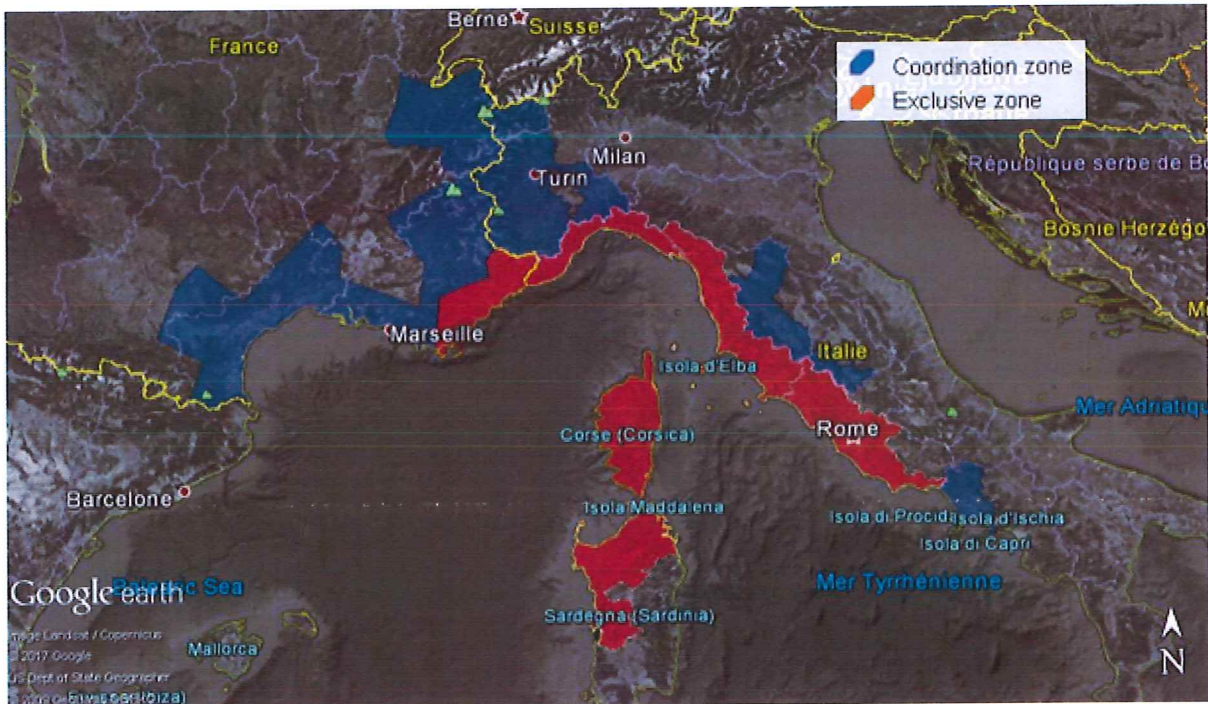
Date : 26/09/17

Sandro Piervenzi

Annex 1 – Coordination and Exclusive zones between France, Italy, Monaco and Vatican City State

The picture below illustrates the coordination and exclusive zones between the Signatory Administrations.

The detailed areas are described in the annexes 5, 6, 7 and 8.



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Annex 10 – Assignments for France outside the exclusive zone

The Signatory Administrations agree on the following technical conditions for France.



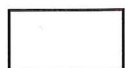
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Agreement_annex7_1

Assignments for France

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Annex 2 – Distribution of the channels inside the exclusive zone

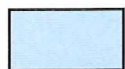
Vatican City State	France	Italy	Monaco
21	21	23	23
28	22	26	27
35	24	27	30
45	25	30	35
	28	32	41
	29	33	
	31	36	
	34	38	
	37	40	
	39	41	
	44	42	
	45	43	
	48	46	
		47	



Exclusive channels



Shared channel between Italy and Monaco



Shared channel between Vatican City State and France

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Frequency choice criteria (in the order of importance):

1. Frequencies which guarantee as much as possible the use of GE06 assignment and allotment;
2. Frequencies currently and previously agreed bilaterally in the road-map for the first switch off;
3. Frequencies which allow the shared use, where possible, on the basis of agreed technical rules.

The implementation of these criteria has conducted to the definition of the following frequency distribution principles:

- a) The identification of ch 35 for Monaco in exclusive use and four channels (23, 27, 30, 41) in shared use with Italy;
- b) France identified 13 frequencies, sharing 3 of them (21, 28 and 45) with Vatican City State;
- c) Italy identified 14 frequencies, sharing 4 channels with Monaco, as indicated in point a);
- d) Vatican City State accepted in exclusive use the same channel used by Monaco (35) and the sharing of 3 channels with France, as in point b).

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Annex 3 – Coordination rules for the shared channels between Italy and Monaco

This annex describes the conditions of the use of the shared channels inside the exclusive zone between Italy and Monaco (see annex 1). Monaco and Italy will both use channels **23, 27, 30, 41**.

Monaco will be entitled to use the assignments listed (in GT1 format) in the following file:



MCO Shared
GT1.txt

Italy will use any possible transmitter located in the exclusive zone with the constraint that the value of the power sum of the *interferent field strength I* received from all the transmitters plus the *protection ratio PR = 21 dB* in each test point listed in the following file:



MCO - test points
list -wanted field str

will be *not greater* than the corresponding **threshold** (listed in column 5). In formula:

$$\text{Power sum (I) + PR} \leq \text{Threshold}$$



The interferent field will be computed by using either the prediction model **ITU-R 526** or the model **ITU-R 1812-1%** of time, with a resolution of 100m for the case of terrestrial path or **ITU-R 1546 1%** of time for the maritime path.

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Annex 4 – Coordination rules for the shared channels between Vatican City State and France

This annex describes the conditions of the use of the channels 21, 28 and 45 inside the exclusive zone for the Vatican City State and France.

The Administrations of Vatican City State and France agreed to the following assignments.

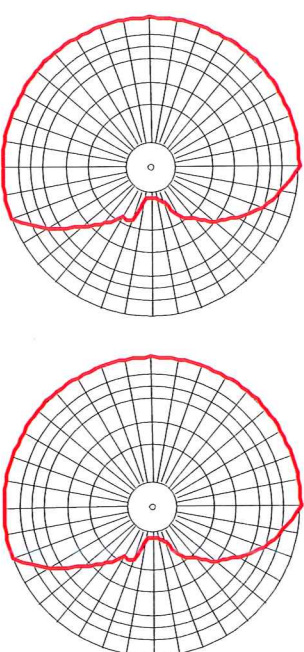
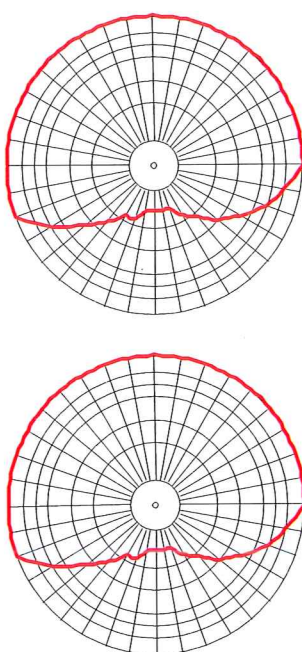
 CVA_F channels.txt	 F_CVA channels.txt
Assignments for Vatican City State	
Assignments for France	

The table below summarizes the assignments

Channel Freq	Adm.	Admin Id Site Nam	Latitude Longitude Altitude	Eff Hgt max Ant. hgt	ERP H ERP V Directivity Polarization	Diagram
45 666 MHz	CVA	CVA0011_3.3 CASTEL GANDOLFO	41° 44' 49" N 12° 39' 02" E 426 m	362 m 30 m	47 ND H	
45 666 MHz	CVA	CVA0003_3.1 CITE DU VATICAN	41° 54' 13" N 12° 27' 00" E 74 m	147 m 73 m	47 ND H	
45 666 MHz	CVA	CVA0007_3.2 SANTA MARIA DI GALERIA	42° 02' 40" N 12° 19' 24" E 149 m	167 m 80 m	47 ND H	
28 530 MHz	CVA	CVA0011_3.3_28 CASTEL GANDOLFO	41° 44' 49" N 12° 39' 02" E 426 m	362 m 30 m	47 ND H	

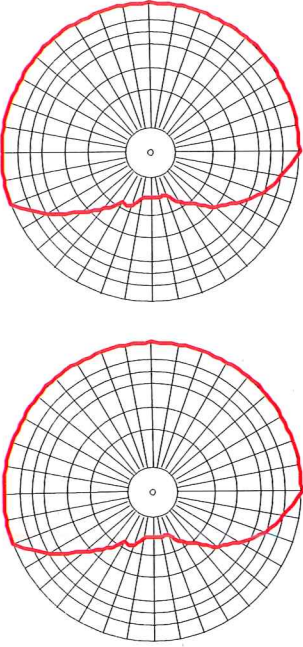
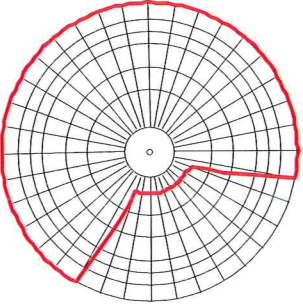
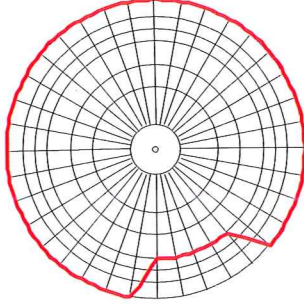
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28 530 MHz	CVA	CVA0003_3.1_28 CITE DU VATICAN	41° 54' 13" N 12° 27' 00" E 74 m	147 m 73 m	47 ND H		
28 530 MHz	CVA	CVA0007_3.2_28 SANTA MARIA DI GALERIA	42° 02' 40" N 12° 19' 24" E 149 m	167 m 80 m	47 ND H		
21 474 MHz	CVA	CVA0010_2.3_A CASTEL GANDOLFO	41° 44' 49" N 12° 39' 02" E 426 m	362 m 30 m	44 44 dBW D M		
21 474 MHz	CVA	CVA0002_2.1 CITE DU VATICAN	41° 54' 13" N 12° 27' 00" E 74 m	147 m 73 m	44 44 dBW D M		

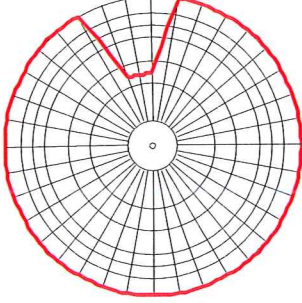
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21 474 MHz	CVA	CVA0006_2.2_A SANTA MARIA DI GALERIA	42° 02' 40" N 12° 19' 24" E 149 m	167 m 80 m	44 44 dBW D M	
21 474 MHz	F	F_20026-21 L ILE-ROUSSE	42° 35' 57" N 8° 55' 02" E 530 m	549 m 20 m	10 ND H	
21 474 MHz	F	F_20008-21 AJACCIO	41° 46' 04" N 8° 45' 59" E 590 m	717 m 130 m	50 D H	
21 474 MHz	F	F_20001-21 BASTIA	42° 41' 45" N 9° 24' 01" E 957 m	1055 m 106 m	50 D H	

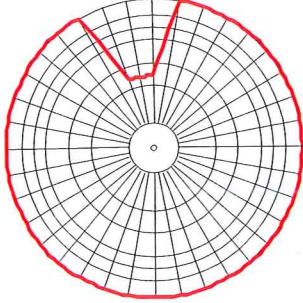
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21 474 MHz	F	F_20010-21 CORTE	42° 10' 11" N 9° 20' 32" E 736 m	733 m 70 m	43 ND H	
21 474 MHz	F	F_20013-21 PORTO VECCHIO	41° 40' 10" N 9° 11' 06" E 1100 m	1017 m 45 m	40 D H	
21 474 MHz	F	F_6002-21 MENTON	43° 45' 13" N 7° 28' 55" E 70 m	104 m 34 m	40 ND H	
21 474 MHz	F	F_83001-21 HYERES	43° 06' 15" N 6° 20' 57" E 205 m	232 m 27 m	40 ND H	
21 474 MHz	F	F_6003-21 NICE MT ALBAN	43° 42' 01" N 7° 18' 02" E 215 m	255 m 40 m	33 ND H	
21 474 MHz	F	F_83004-21 ST RAPHAEL	43° 28' 34" N 6° 54' 20" E 488 m	555 m 67 m	53 ND H	
21 474 MHz	F	F_20004-21 CALVI	42° 34' 09" N 8° 52' 08" E 534 m	558 m 30 m	10 ND H	
28 530 MHz	F	F_20008-28 AJACCIO	41° 46' 04" N 8° 45' 59" E 590 m	693 m 103 m	50 ND H	

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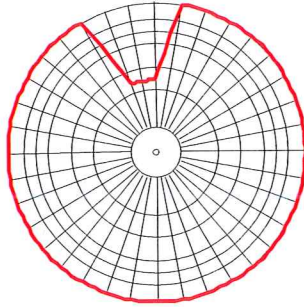


28 530 MHz	F	F_20013-28 PORTO VECCHIO 1	41° 40' 10" N 9° 11' 03" E 1200 m	1115 m 33 m	40 D H	
28 530 MHz	F	F_83001-28 HYERES	43° 06' 15" N 6° 20' 57" E 205 m	232 m 27 m	40 ND H	
28 530 MHz	F	F_20026-28 L ILE-ROUSSE	42° 35' 57" N 8° 55' 02" E 530 m	549 m 20 m	10 ND H	
28 530 MHz	F	F_6003-28 NICE MT ALBAN	43° 42' 01" N 7° 18' 02" E 215 m	255 m 40 m	33 ND H	
28 530 MHz	F	F_6002-28 MENTON	43° 45' 13" N 7° 28' 55" E 70 m	104 m 34 m	40 ND H	
28 530 MHz	F	F_20009-28 CORTE BISTUGLIO	42° 19' 47" N 9° 09' 30" E 741 m	454 m 10 m	17 ND H	






28 530 MHz	F	F_20004-28 CALVI	42° 34' 09" N 8° 52' 08" E 534 m	558 m 30 m	10 ND H
28 530 MHz	F	F_83004-28 ST RAPHAEL	43° 28' 34" N 6° 54' 20" E 488 m	555 m 67 m	53 ND H
45 666 MHz	F	F_20008-45 AJACCIO	41° 46' 04" N 8° 45' 59" E 590 m	693 m 103 m	50 ND H
45 666 MHz	F	F_20013-45 PORTO VECCHIO 1	41° 40' 10" N 9° 11' 03" E 1200 m	1115 m 33 m	40 D H
45 666 MHz	F	F_83004-45 ST RAPHAEL	43° 28' 34" N 6° 54' 20" E 488 m	555 m 67 m	53 ND H
45 666 MHz	F	F_83001-45 HYERES	43° 06' 15" N 6° 20' 57" E 205 m	232 m 27 m	40 ND H
45 666 MHz	F	F_6003-45 NICE MT ALBAN	43° 42' 01" N 7° 18' 02" E 215 m	255 m 40 m	33 ND H



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45 666 MHz	F	F_6002-45 MENTON	43° 45' 13" N 7° 28' 55" E 70 m	104 m 34 m	40 ND H
45 666 MHz	F	F_20009-45 CORTE BISTUGLIO	42° 19' 47" N 9° 09' 30" E 741 m	454 m 10 m	17 ND H
45 666 MHz	F	F_20004-45 CALVI	42° 34' 09" N 8° 52' 08" E 534 m	558 m 30 m	10 ND H
45 666 MHz	F	F_20026-45 L'ILE-ROUSSE	42° 35' 57" N 8° 55' 02" E 530 m	549 m 20 m	10 ND H

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Annex 5 – Allotments for France

The Signatory Administrations agree on the following technical conditions for France.

 F-Exclusive zone.kml
Allotments within the exclusive zone for France

 F-Coordination zone.kml
Allotments within the coordination zone for France


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Annex 6 – Allotments for Italy


The allotments for Italy are composed of the geographical areas related to the following administrative provinces:


A) Provinces included in the Exclusive Zone:

Imperia, Savona, Genova, La Spezia, Massa, Lucca, Livorno, Pisa, Grosseto, Viterbo, Roma, Latina, Oristano, Sassari.

B) Provinces included in the Coordination Zone :

Imperia, Savona, Genova, La Spezia, Massa, Lucca, Livorno, Pisa, Grosseto, Viterbo, Roma, Latina, Oristano, Sassari, Aosta, Torino, Cuneo, Alessandria, Firenze, Prato, Siena, Terni, Napoli, Caserta.

 Exclusive Zone.kmz
Allotments within the exclusive zone for Italy

 CoordinationZone.km z
Allotments within the coordination zone for Italy



Annex 7 – Allotments for Monaco

The Signatory Administrations agree on the following technical conditions for Monaco.

Reference	Designation	Latitude	Longitude
TP01	PASTEUR	43 43 47.15	7 24 40.62
TP02	FONTVIEILLE	43 43 35.40	7 25 14.27
TP03	HECTOR-OTTO	43 43 59.57	7 24 46.49
TP04	ROCHER	43 43 55.09	7 25 38.93
TP05	SAINTE-DEVOTE	43 44 13.45	7 25 9.14
TP06	PORT-CONDAMINE	43 44 14.74	7 25 41.75
TP07	PRINCESSE-CHARLOTTE	43 44 26.95	7 25 29.71
TP08	CASINO	43 44 20.74	7 25 43.71
TP09	GRIMALDI-FORUM	43 44 34.62	7 25 53.04
TP10	LARVOTTO	43 44 46.19	7 25 53.18
TP11	SAINT-ROMAN	43 45 2.43	7 26 16.19
TP12	SPORTING	43 44 47.17	7 26 20.03
TP13	PORTIER	43 44 28.06	7 25 54.53



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Annex 8 – Allotments for Vatican City State

The Signatory Administrations agree on the following technical conditions for Vatican City State.

Descrizione	Ubicazione	LATITUDINE				LONGITUDINE		
		gg	mm	ss		gg	mm	ss
Città del Vaticano								
Estremo Est	Piazza S. Pietro	41	54	8		12	27	28
Estremo Ovest		41	54	6		12	26	45
Estremo Nord	Bastioni di Michelangelo	41	54	26		12	27	19
Estremo SUD	Perugino	41	54	1		12	27	5
Interno 1	Zecca	41	54	13		12	27	7
S.Giovanni		41	53	10		12	30	20
S.Maria Maggiore		41	53	52		12	29	52
S. Paolo	ed.1	41	51	33		12	28	29
S. Paolo	ed.2	41	51	32		12	28	40
S. Paolo	ed.3	41	51	25		12	28	37
S. Paolo	ed.4	41	51	25		12	28	26
S. Paolo	ed.5	41	51	31		12	28	16
S. Paolo	ed.6	41	51	33		12	28	27
S. Paolo	ed.7	41	51	26		12	28	25
S. Paolo	ed.8	41	51	27		12	28	16
Palazzo Dataria		41	54	0		12	29	3
Palazzo della Cancelleria		41	53	48		12	28	16
Propaganda Fide		41	54	15		12	28	59
S.Callisto		41	53	19		12	28	10
Palazzo dei Convertendi		41	54	10		12	27	37
Palazzo S. Offizio		41	54	5		12	27	24
Palazzo del Vicariato		41	53	47		12	28	41
Gianicolo	Ed. 1	41	53	54		12	27	41
Gianicolo	Ed. 2	41	54	1		12	27	23
Gianicolo	Ed. 3	41	54	5		12	27	30
Gianicolo	Ed. 4	41	53	39		12	27	34
Gregoriana	Ed. 1	41	53	59		12	28	47
Gregoriana	Ed. 2	41	53	56		12	29	3
Istituto Biblico		41	53	56		12	28	59
Palazzo SS. Apostoli		41	53	53		12	28	58
S.Andrea della Valle		41	53	45		12	28	27
S. Carlo ai catinari		41	53	39		12	28	33
Russicum		41	53	51		12	30	0
S. Apollinare		41	54	1		12	28	24
Casa del Clero		41	53	9		12	29	41
Pontificia Accademia Ecclesiastica		41	53	52		12	28	36





Descrizione	Ubicazione	LATITUDINE			LONGITUDINE		
Castel Gandolfo							
Estremo Nord		41	44	54	12	38	56
Estremo Sud		41	43	53	12	39	30
Estremo Est		41	43	59	12	39	55
Estremo Ovest		41	44	17	12	39	12

Descrizione	Ubicazione	LATITUDINE			LONGITUDINE		
S.Maria di Galeria							
Estremo sud- ovest		42	2	12	12	18	55
Estremo Nord		42	3	36	12	19	28
Estremo Est		42	2	12	12	20	49
Estremo Nord-Est		42	3	10	12	20	28

Descrizione	Ubicazione	LATITUDINE			LONGITUDINE		
Ospedale Bambino Gesù S. Marinella							
Estremo Sud-Ovest		42	1	56	11	51	7
Estremo Nord-Ovest		42	1	59	11	51	6
Estremo Nord-Est		42	2	0	11	51	14
Estremo Sud-Est		42	1	58	11	51	14

Descrizione	Ubicazione	LATITUDINE			LONGITUDINE		
Ospedale Bambino Gesù di Palidoro							
Estremo Ovest		41	55	10	12	8	11
Estremo Nord		41	55	18	12	8	21
Estremo Est		41	54	58	12	8	47
Estremo Sud		41	54	55	12	8	37

Descrizione	Ubicazione	LATITUDINE			LONGITUDINE		
Tenuta di Castel Romano							
Estremo Nord		41	43	49	12	25	53
Estremo Sud-Ovest		41	43	5	12	25	39
Estremo Est		41	43	25	12	26	34
Estremo Sud-Est		41	43	16	12	26	19
Centro		41	43	30	12	26	8



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Annex 9 – Assignments for Italy outside the exclusive zone

Italy will send to the other Signatory Administrations, the data regarding the assignments inside the coordination zone but outside the exclusive zone, as soon as available.

It is noted that for Monaco and Vatican City State these assignments should normally be agreed, especially for Monaco, if the threshold is respected on all the test points as described in Annex 3.

According to article 5 of the Agreement these assignments will be registered and used only upon the agreement of the Signatory Administrations.

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Annex 10 – Assignments for France outside the exclusive zone

The Signatory Administrations agree on the following technical conditions for France.



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Assignments for France

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