

Liberia

FOCAL POINT REGARDING CORRESPONDENCE ON THIS QUESTIONNAIRE
(PARTS I AND II)

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To be returned no later than 31 January 2000 to:
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Section IV – Table of Frequency Allocations (extract from the RR, 1998)

27.5-47 MHz

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
27.5-28	METEOROLOGICAL AIDS FIXED MOBILE		Fixed Mobile	
28-29.7	AMATEUR AMATEUR-SATELLITE		Fixed Amateur/Mobile	
29.7-30.005	FIXED MOBILE		Fixed Mobile	
30.005-30.01	SPACE OPERATION (satellite identification) FIXED MOBILE SPACE RESEARCH		Fixed Mobile	
30.01-37.5	FIXED MOBILE		Fixed /Mobile	
37.5-38.25	FIXED MOBILE Radio astronomy S5.149		Fixed Mobile	
38.25-39.986	FIXED MOBILE		Fixed /Mobile	
39.986-40.02	FIXED MOBILE Space research		Fixed Mobile	
40.02-40.98	FIXED MOBILE S5.150		Fixed Mobile	

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
40.98-41.015	FIXED MOBILE Space research S5.160 S5.161		Fixed Mobile	
41.015-44	FIXED MOBILE S5.160 S5.161		Fixed Mobile	
44-47	FIXED MOBILE S5.162 S5.162A		Fixed Mobile	

47-75.2 MHz

47-68 BROADCASTING S5.162A S5.163 S5.164 S5.165 S5.169 S5.171	47-50 FIXED MOBILE	47-50 FIXED MOBILE BROADCASTING	Fixed Mobile Broadcasting	
	50-54 AMATEUR S5.166 S5.167 S5.168 S5.170		Fixed Mobile Broadcasting	
	54-68 BROADCASTING Fixed Mobile S5.172	54-68 FIXED MOBILE BROADCASTING	Fixed Mobile Broadcasting	

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
68-74.8 FIXED MOBILE except aeronautical mobile S5.149 S5.174 S5.175 S5.177 S5.179	68-72 BROADCASTING Fixed Mobile S5.173	68-74.8 FIXED MOBILE S5.149 S5.176 S5.179	Fixed Mobile	
	72-73 FIXED MOBILE		Fixed Mobile	
	73-74.6 RADIO ASTRONOMY S5.178			
	74.6-74.8 FIXED MOBILE		Fixed Mobile	
74.8-75.2	AERONAUTICAL RADIONAVIGATION S5.180 S5.181		Aeronautical Navigation	

75.2-137.175 MHz

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
75.2-87.5 FIXED MOBILE except aeronautical mobile S5.175 S5.179 S5.184 S5.187	75.2-75.4 FIXED MOBILE S5.179		Fixed Mobile	
	75.4-76 FIXED MOBILE	75.4-87 FIXED MOBILE	Fixed Mobile	
	76-88 BROADCASTING Fixed Mobile	S5.149 S5.182 S5.183 S5.188	Fixed Mobile	
		87-100 FIXED MOBILE BROADCASTING	Fixed Mobile	Portion of this band is used for Broadcast.
87.5-100 BROADCASTING S5.190	S5.185 88-100 BROADCASTING		Broadcasting Broadcasting	
100-108	BROADCASTING S5.192 S5.194		Broadcasting	
108-117.975	AERONAUTICAL RADIONAVIGATION S5.197			
117.975-137	AERONAUTICAL MOBILE (R) S5.111 S5.198 S5.199 S5.200 S5.201 S5.202 S5.203 S5.203A S5.203B		Fixed Aeronautical Mobile (or)	

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
137-137.025	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) S5.208A S5.209 SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) S5.204 S5.205 S5.206 S5.207 S5.208		Fixed Mobile	
137.025-137.175	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile-satellite (space-to-Earth) S5.208A S5.209 Mobile except aeronautical mobile (R) S5.204 S5.205 S5.206 S5.207 S5.208		Fixed Mobile	

137.175-148 MHz

137.175-137.825	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) S5.208A S5.209 SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) S5.204 S5.205 S5.206 S5.207 S5.208		Fixed Mobile	
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Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
137.825-138	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile-satellite (space-to-Earth) S5.208A S5.209 Mobile except aeronautical mobile (R) S5.204 S5.205 S5.206 S5.207 S5.208		Fixed Mobile	
138-143.6 AERONAUTICAL MOBILE (OR) S5.210 S5.211 S5.212 S5.214	138-143.6 FIXED MOBILE RADIOLOCATION Space research (space-to-Earth)	138-143.6 FIXED MOBILE Space research (space-to-Earth) S5.207 S5.213	Fixed Mobile	
143.6-143.65 AERONAUTICAL MOBILE (OR) SPACE RESEARCH (space-to-Earth) S5.211 S5.212 S5.214	143.6-143.65 FIXED MOBILE RADIOLOCATION SPACE RESEARCH (space-to-Earth)	143.6-143.65 FIXED MOBILE SPACE RESEARCH (space-to-Earth) S5.207 S5.213	Fixed Mobile	
143.65-144 AERONAUTICAL MOBILE (OR) S5.210 S5.211 S5.212 S5.214	143.65-144 FIXED MOBILE RADIOLOCATION Space research (space-to-Earth)	143.65-144 FIXED MOBILE Space research (space-to-Earth) S5.207 S5.213	Fixed Mobile	
144-146	AMATEUR S5.120 AMATEUR-SATELLITE S5.216		Amateur	

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
146-148 FIXED MOBILE except aeronautical mobile (R)	146-148 AMATEUR S5.217	146-148 AMATEUR FIXED MOBILE S5.217	Fixed Mobile	
148-149.9 FIXED MOBILE except aeronautical mobile (R) MOBILE-SATELLITE (Earth-to-space) S5.209 S5.218 S5.219 S5.221	148-149.9 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) S5.209 S5.218 S5.219 S5.221		Fixed Mobile	
149.9-150.05	MOBILE-SATELLITE (Earth-to-space) S5.209 S5.224A RADIONAVIGATION-SATELLITE S5.224B S5.220 S5.222 S5.223		Fixed Mobile	
150.05-153 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY S5.149	150.05-156.7625 FIXED MOBILE		Fixed Mobile	
153-154 FIXED MOBILE except aeronautical mobile (R) Meteorological Aids			Fixed Mobile	

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
154-156.7625 FIXED MOBILE except aeronautical mobile (R) S5.226 S5.227	S5.225 S5.226 S5.227		Fixed Mobile	
156.7625-156.8375	MARITIME MOBILE (distress and calling) S5.111 S5.226		Maritime Mobile (distress and calling)	
156.8375-174 FIXED MOBILE except aeronautical mobile S5.226 S5.229	156.8375-174 FIXED MOBILE S5.226 S5.230 S5.231 S5.232		Fixed Mobile	
174-223 BROADCASTING S5.235 S5.237 S5.243	174-216 BROADCASTING Fixed Mobile S5.234	174-223 FIXED MOBILE BROADCASTING S5.233 S5.238 S5.240 S5.245	Broadcasting	
	216-220 FIXED MARITIME MOBILE Radiolocation S5.241 S5.242			

220-335.4 MHz

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
	220-225			
223-230 BROADCASTING Fixed Mobile	AMATEUR FIXED MOBILE Radiolocation S5.241	223-230 FIXED MOBILE BROADCASTING	Broadcasting	
S5.243 S5.246 S5.247	225-235 FIXED MOBILE	AERONAUTICAL RADIONAVIGATION Radiolocation S5.250		
230-235 FIXED MOBILE		230-235 FIXED MOBILE AERONAUTICAL RADIONAVIGATION S5.250	Fixed Mobile	
S5.247 S5.251 S5.252				
235-267	FIXED MOBILE S5.111 S5.199 S5.252 S5.254 S5.256		*Fixed Mobile	
267-272	FIXED MOBILE Space operation (space-to-Earth) S5.254 S5.257		Fixed Mobile	
272-273	SPACE OPERATION (space-to-Earth) FIXED MOBILE S5.254		Fixed Mobile	

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
273-312	FIXED MOBILE S5.254		Fixed Mobile	
312-315	FIXED MOBILE Mobile-satellite (Earth-to-space) S5.254 S5.255		Fixed Mobile	
315-322	FIXED MOBILE S5.254		Fixed Mobile	
322-328.6	FIXED MOBILE RADIO ASTRONOMY S5.149		Fixed Mobile	
328.6-335.4	AERONAUTICAL RADIONAVIGATION S5.258 S5.259			

335.4-410 MHz

335.4-387	FIXED MOBILE S5.254		Fixed Mobile	
387-390	FIXED MOBILE Mobile-satellite (space-to-Earth) S5.208A S5.254 S5.255		Fixed Mobile	
390-399.9	FIXED MOBILE S5.254		Fixed Mobile	

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
399.9-400.05	MOBILE-SATELLITE (Earth-to-space) S5.209 S5.224A RADIONAVIGATION-SATELLITE S5.222 S5.224B S5.260 S5.220			
400.05-400.15	STANDARD FREQUENCY AND TIME SIGNAL- SATELLITE (400.1 MHz) S5.261 S5.262			
400.15-401	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) S5.208A S5.209 SPACE RESEARCH (space-to-Earth) S5.263 Space operation (space-to-Earth) S5.262 S5.264		Fixed	
401-402	METEOROLOGICAL AIDS SPACE OPERATION (space-to-Earth) EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) Fixed Mobile except aeronautical mobile		Fixed Mobile	
402-403	METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) Fixed Mobile except aeronautical mobile		Fixed Mobile	
403-406	METEOROLOGICAL AIDS Fixed Mobile except aeronautical mobile		Fixed Mobile	
406-406.1	MOBILE-SATELLITE (Earth-to-space) S5.266 S5.267			

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
406.1-410	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY S5.149		Fixed Mobile	

410-470 MHz

410-420	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-space) S5.268		Fixed Mobile	
420-430	FIXED MOBILE except aeronautical mobile Radiolocation S5.269 S5.270 S5.271		Fixed Mobile	
430-440 AMATEUR RADIOLOCATION S5.138 S5.271 S5.272 S5.273 S5.274 S5.275 S5.276 S5.277 S5.280 S5.281 S5.282 S5.283	430-440 RADIOLOCATION Amateur S5.271 S5.276 S5.277 S5.278 S5.279 S5.281 S5.282		Fixed/ Amateur/Mobile	
440-450	FIXED MOBILE except aeronautical mobile Radiolocation S5.269 S5.270 S5.271 S5.284 S5.285 S5.286		Fixed Mobile	
450-455	FIXED MOBILE S5.209 S5.271 S5.286 S5.286A S5.286B S5.286C S5.286D S5.286E			

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
455-456 FIXED MOBILE S5.209 S5.271 S5.286A S5.286B S5.286C S5.286E	455-456 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) S5.286A S5.286B S5.286C S5.209 S5.271	455-456 FIXED MOBILE S5.209 S5.271 S5.286A S5.286B S5.286C S5.286E	Fixed Mobile	
456-459	FIXED MOBILE S5.271 S5.287 S5.288		Fixed Mobile	
459-460 FIXED MOBILE S5.209 S5.271 S5.286A S5.286B S5.286C S5.286E	459-460 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) S5.286A S5.286B S5.286C S5.209 S5.271	459-460 FIXED MOBILE S5.209 S5.271 S5.286A S5.286B S5.286C S5.286E	Fixed Mobile	
460-470	FIXED MOBILE Meteorological-Satellite (space-to-Earth) S5.287 S5.288 S5.289 S5.290		Fixed Mobile	

470-890 MHz

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
470-790 BROADCASTING S5.149 S5.291A S5.294 S5.296 S5.300 S5.302 S5.304 S5.306 S5.311 S5.312	470-512 BROADCASTING Fixed Mobile S5.292 S5.293	470-585 FIXED MOBILE BROADCASTING S5.291 S5.298	Fixed Mobile Broadcasting	
	512-608 BROADCASTING S5.297	585-610 FIXED MOBILE BROADCASTING RADIONAVIGATION S5.149 S5.305 S5.306 S5.307		
	608-614 RADIO ASTRONOMY Mobile-satellite except aeronautical mobile-satellite (Earth-to-space)	610-890 FIXED MOBILE BROADCASTING		
	614-806 BROADCASTING Fixed Mobile S5.293 S5.309 S5.311			
790-862 FIXED BROADCASTING S5.312 S5.314 S5.315 S5.316 S5.319 S5.321	806-890 FIXED MOBILE BROADCASTING			
862-890 FIXED MOBILE except aeronautical mobile BROADCASTING S5.322			Fixed Mobile Broadcasting	

Read only			To be completed	
Allocation to services				
Region 1	Region 2	Region 3	National Allocation	Remarks
S5.319 S5.323	S5.317 S5.318	S5.149 S5.305 S5.306 S5.307 S5.311 S5.320		

890-1 350 MHz

890-942 FIXED MOBILE except aeronautical mobile BROADCASTING S5.322 Radiolocation S5.323	890-902 FIXED MOBILE except aeronautical mobile Radiolocation S5.318 S5.325	890-942 FIXED MOBILE BROADCASTING Radiolocation S5.327	Fixed Mobile Broadcasting	
	902-928 FIXED Amateur Mobile except aeronautical mobile Radiolocation S5.150 S5.325 S5.326		Fixed Mobile Broadcasting	
	928-942 FIXED MOBILE except aeronautical mobile Radiolocation S5.325		Fixed Mobile Broadcasting	
942-960 FIXED MOBILE except aeronautical mobile BROADCASTING S5.322 S5.323	942-960 FIXED MOBILE	942-960 FIXED MOBILE BROADCASTING S5.320	Fixed Mobile Broadcasting	

Liberia

QUESTIONNAIRE - PART II
(To be completed by Administrations only)

General Questions on National Spectrum Management

Describe succinctly the problems that your administration is currently experiencing
in national spectrum management
(for example subject areas in national spectrum management).

Country LIBERIA

Focal point _____

The following general questions on national spectrum management are based in part on the functional requirements of spectrum management described in the handbook on "National Spectrum Management." If you need additional space to answer the questions please continue on a separate sheet of paper.

1. Do you have a national law governing spectrum management? YES NO __
 - Last date this law was changed or modified? 1978
 - Are any actions planned to change this law? YES NO __

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

Yes. The assistance of the ITU is required, since the whole system was disorganized during our civil crisis.

2. Have you published regulations and procedures for national spectrum management (e.g. radio services, license requirements etc.)? YES __ NO We are in the process of doing so.

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

During the de-factor administrations (2 governments) in Liberia, spectrum management was left at the will and pleasure of any one

3. Do you have a national radio frequency spectrum allocation table? YES NO __

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

With the introduction of new technologies in the telecommunication sector of Liberia, ITU is needed to help frame our system.

4. Do you have technical specifications for national spectrum use? YES NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

No. can be handled in line with appropriate regulations that are being derived.

5. Do you have a need for any spectrum redeployment*? YES NO

* The term "redemption" is used here to refer to a process of national scope in which an assessment is conducted 1) to determine if portions of spectrum can be identified that are in limited use; and 2) to determine if such spectrum segments can be reallocated for use in delivering radiocommunication services that have expanding spectrum requirements.

- If so, do you have a strategy for achieving this redeployment in respective frequency bands and for given radiocommunication services? YES NO Not yet.

- Please define the established strategy and describe the nature of the consultation, if any, with users regarding the potential costs resulting from the planned redeployment.

6. What is the total cost of national spectrum management functions performed by your Government (expressed in Swiss francs)? 60,000 SF

- What is the source of the funding required to accomplish these spectrum management functions?

This exercise has been conducted by our Government through the Ministry of Posts and Telecommunications. Efforts are underway to change.

7. Do you have a method for establishing spectrum users' fees? YES NO

- If so, please give a brief description of the method used in establishing those fees.

FF = (BW X FC X AC) + MC Where FF - Freq. Fee, BW - Bandwidth; Frequency Constant; AC - Application Constant; MC - Maximum Charge.

8. Do you maintain centralized databases for spectrum management? YES NO Centralized Manual System

- What is the approximate size of your database (expressed in number of records)?

1000 files

- Do you have a computerized data base management system (DBMS)?

YES__ NO_ We are about to start.

- What DBMS system do you use?

- Are these frequency assignment records available to public?

YES_ NO__

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

There are no major problems in this area; but general assistance is needed from the ITU.

9. Do you notify frequency assignments to the ITU?

YES__ NO_ Not at Present

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

Yes.

10. Do you have a policy and planning function for national spectrum management (i.e. a national strategy for future use of the spectrum)?

YES__ NO__

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

Yes, ITU is needed to help develop and map our Spectrum allocation Plan.

11. Do you perform technical analyses of frequency assignment requests? YES__ NO__

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

Yes.

12. Do you perform radio monitoring? YES_ NO__

- number of fixed monitoring stations None

- facilities available at fixed monitoring stations

-- monitoring up to ___ MHz

-- direction finding up to ___ MHz

- number of mobile monitoring stations None

- facilities available at mobile monitoring stations

-- monitoring up to ___ MHz

-- direction finding up to ___ MHz

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

Lack of Monitoring equipment. All equipment got destroyed by fire that gutted our Central Office in 1996.

13. Do you perform technical analyses of radio frequency interference complaints? YES x NO __

- Do you have an established consultation process, involving Government and non-government organization, for resolving these complaints? YES x NO __

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

Additional methods required if different from ours.

14. What computers and operating systems are in use for national spectrum management?

Type of computers None

Operating system(s) None

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

15. Number of technical/professional staff in national spectrum management? Six (6)

16. Number of support staff in national spectrum management? Eight (8)

17. Describe your country's spectrum management structure (Please enclose a copy of organization chart).

18. Do you use the ITU-R Handbooks and Reports on:

- | | | |
|----|---|------------|
| a) | National Spectrum Management, version 1995 ? | <u>Yes</u> |
| b) | Spectrum Monitoring ¹ , version 1995? | <u>Yes</u> |
| c) | Computer-aided Techniques for Spectrum Management, version 1999? | <u>No</u> |
| d) | HF Broadcasting System Design, version 1999? | <u>No</u> |
| e) | Report SM.2012, Economic Aspects of Spectrum Management, version 1997 ² ? | <u>No</u> |
| f) | Windows Basic Automated Spectrum Management System (WinBASMS) Software
Version 1997, Manual Version 1997 | <u>No</u> |

What additional information/handbooks do you need from the ITU?

The Updated version of National Spectrum Management handbook is needed including items a - e of the above handbooks.

*To be returned no later than 31 January 2000 to:
ITU-D Study Groups Secretariat
Telecommunication Development Bureau
Fax: +41 22 730 54 84
E-Mail: devsg1@itu.int*

THANK YOU FOR YOUR COOPERATION

¹ The Spectrum Monitoring Handbook is currently being updated, therefore, you are urged to contact Mr Jan Verduijn (NL), the designated Rapporteur from ITU-R Study Group 1, Working Party 1C if you have any comments that you wish included in a future version of this Handbook.

² This Report SM.2012 was updated during the ITU-R Study Group 1 meeting in August 1999. This new version is expected to be available in the three working languages by January 2000.

