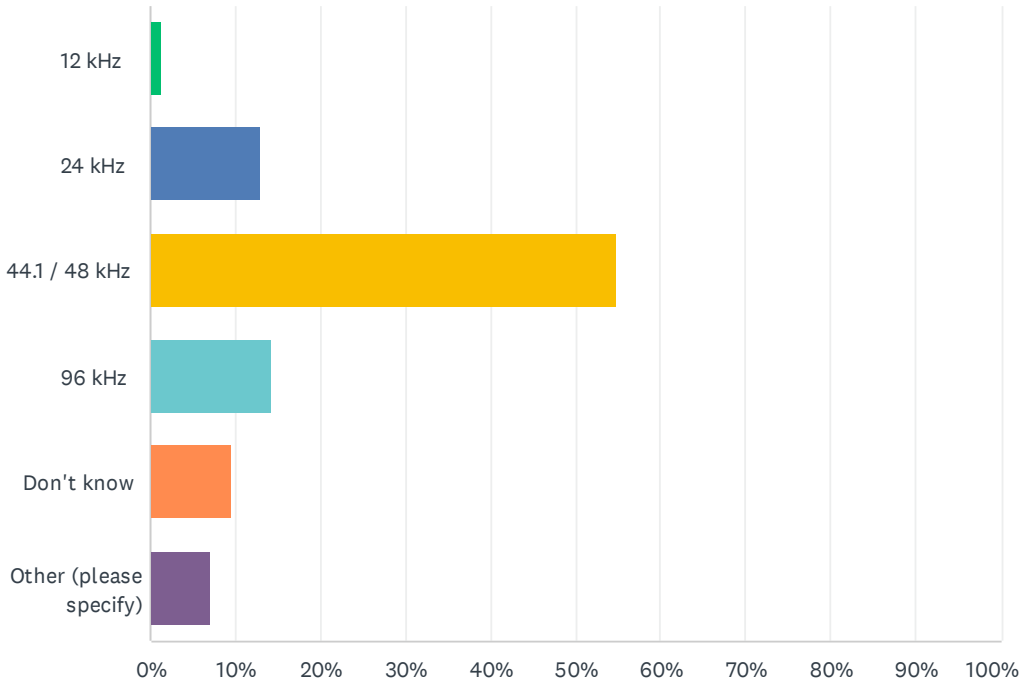
Q1 Audio Settings What sample rate would you recommend?

Answered: 84 Skipped: 0

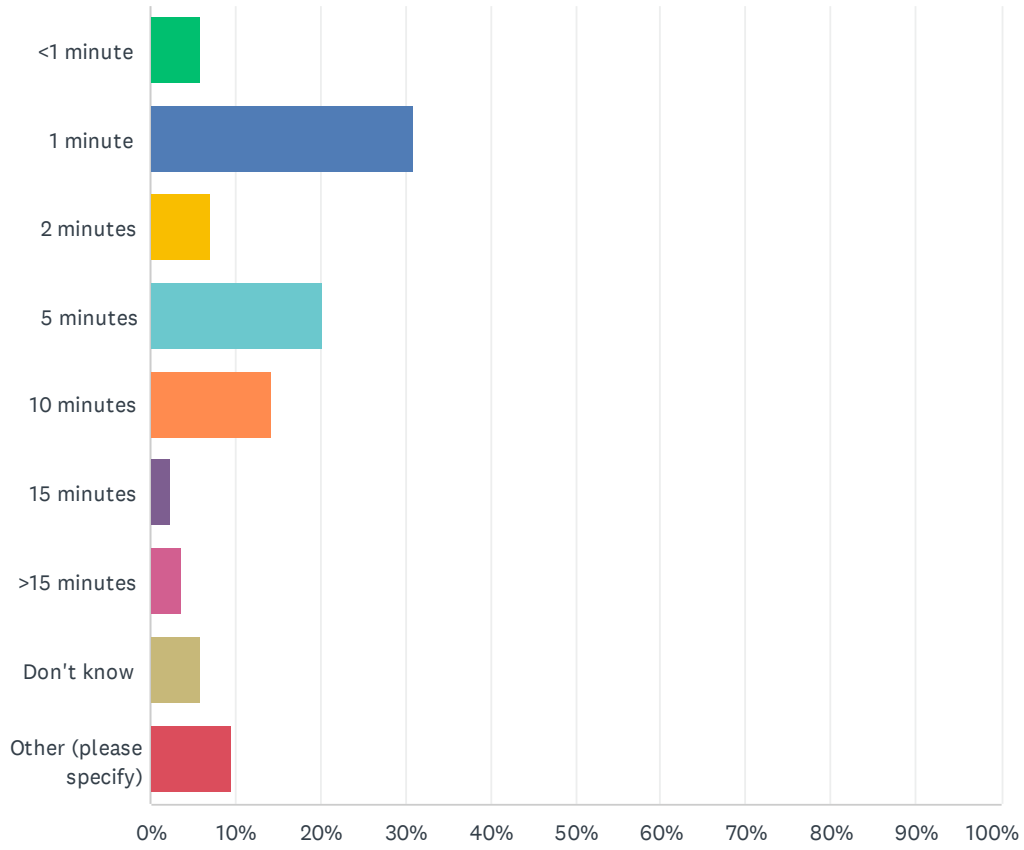


ANSWER CHOICES	RESPONSES	
12 kHz	1.19%	1
24 kHz	13.10%	11
44.1 / 48 kHz	54.76%	46
96 kHz	14.29%	12
Don't know	9.52%	8
Other (please specify)	7.14%	6
TOTAL		84

#	OTHER (PLEASE SPECIFY)	DATE
1	Sample at both low and high freq depending on target taxa	6/16/2022 2:18 PM
2	Being a complete novice I cannot say	6/16/2022 12:03 PM
3	depends on the bat species monitored and equipment used	6/14/2022 2:45 PM
4	32 kHz or 44.1kHz	6/11/2022 7:36 PM
5	300 kHz because Europe is very interested in their harbor porpoise populations and those clicks go up to 140 kHz many times. Anything less than this loses entire classes of high frequency dolphins	6/6/2022 9:15 PM
6	36kHz	6/6/2022 6:11 PM

Q2 Recording Length How long should each .wav file be?

Answered: 84 Skipped: 0



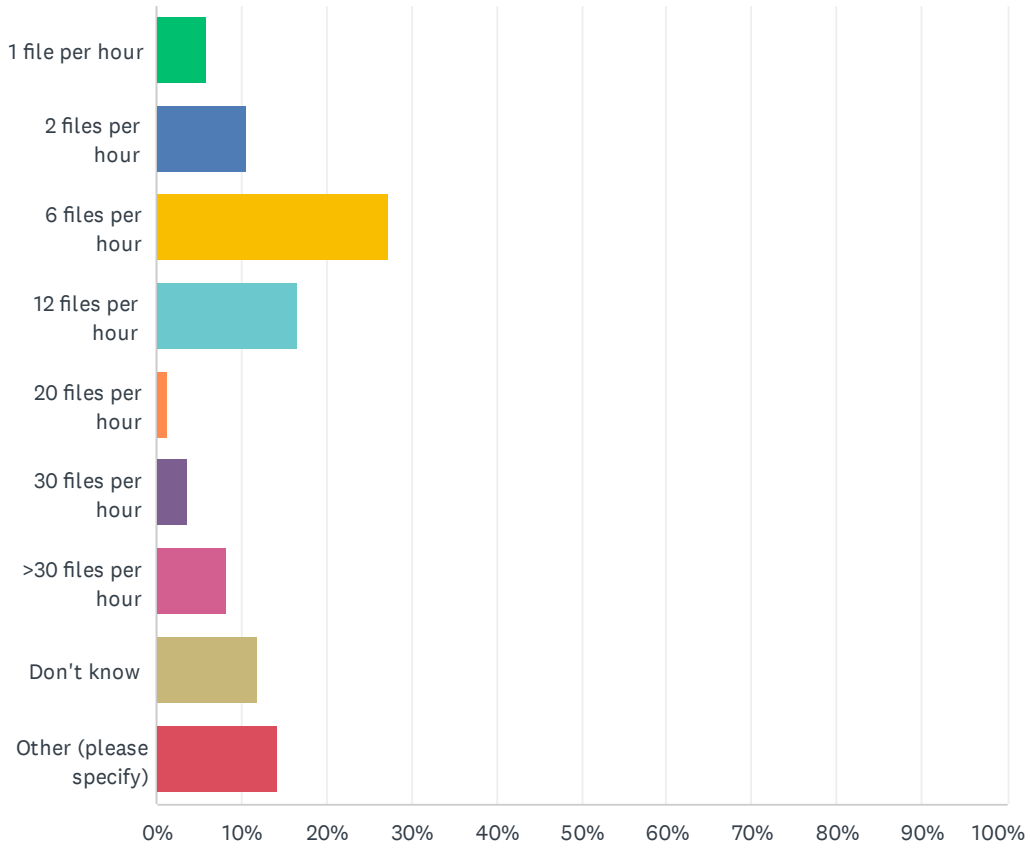
ANSWER CHOICES	RESPONSES	
<1 minute	5.95%	5
1 minute	30.95%	26
2 minutes	7.14%	6
5 minutes	20.24%	17
10 minutes	14.29%	12
15 minutes	2.38%	2
>15 minutes	3.57%	3
Don't know	5.95%	5
Other (please specify)	9.52%	8
TOTAL		84

#	OTHER (PLEASE SPECIFY)	DATE
1	Depends on taxa(short for bats) longer for birds or for soundscape	6/16/2022 2:18 PM
2	Again I am new to this field	6/16/2022 12:03 PM
3	45 mins-4 hr	6/14/2022 2:45 PM
4	Need more information on aim of project	6/10/2022 9:57 AM

5	As long as at least 1 minute that’s fine. I think it’s temporal resolution of analysis that matters more, and I’m now leaning towards calculating indices on a per-minute basis.	6/10/2022 6:23 AM
6	Depends on goal of survey	6/6/2022 7:37 PM
7	Triggered recordings	6/6/2022 12:06 PM
8	Continuous	6/6/2022 8:22 AM

Q3 Number of Recordings How many .wav files per hour?

Answered: 84 Skipped: 0



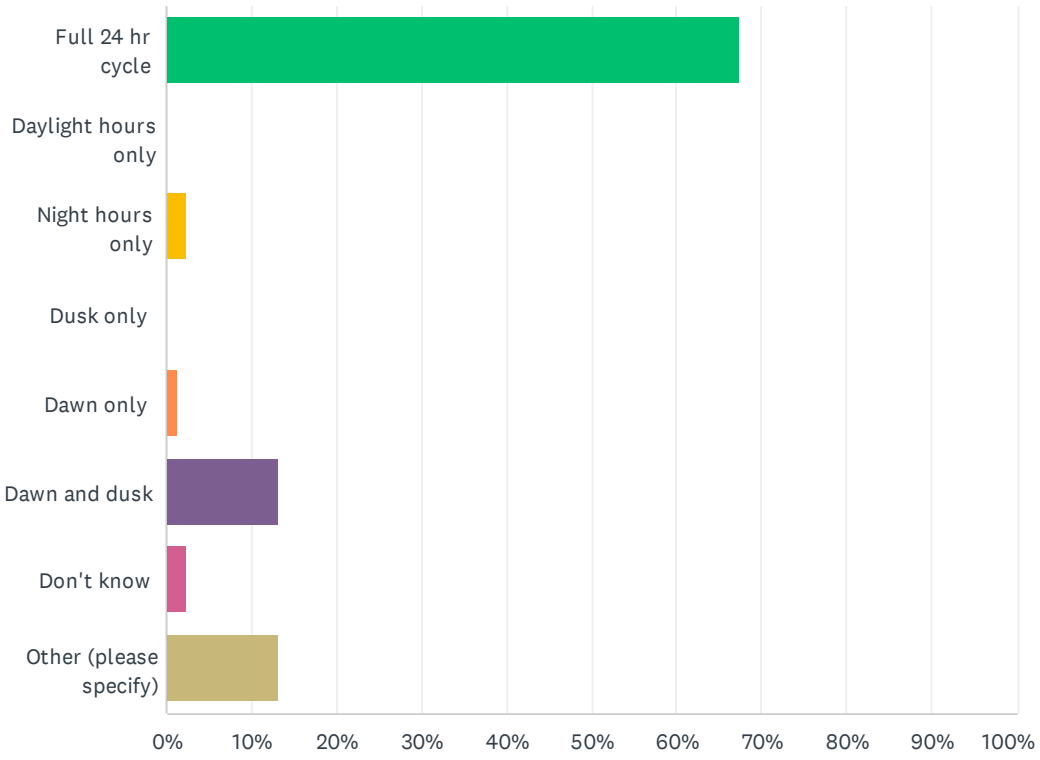
ANSWER CHOICES	RESPONSES	
1 file per hour	5.95%	5
2 files per hour	10.71%	9
6 files per hour	27.38%	23
12 files per hour	16.67%	14
20 files per hour	1.19%	1
30 files per hour	3.57%	3
>30 files per hour	8.33%	7
Don't know	11.90%	10
Other (please specify)	14.29%	12
TOTAL		84

#	OTHER (PLEASE SPECIFY)	DATE
1	4 files per hour (i.e. on 10min, off 5min)	6/23/2022 5:03 PM
2	4	6/16/2022 3:06 PM
3	Depends	6/16/2022 2:18 PM
4	I hope to learn	6/16/2022 12:03 PM

5	4	6/15/2022 9:12 AM
6	I’m not convinced this should be limited	6/15/2022 8:32 AM
7	As required based on triggering events	6/14/2022 6:08 PM
8	depends on location and in/outside bat roost	6/14/2022 2:45 PM
9	Need more information on aim of project	6/10/2022 9:57 AM
10	One throughout day and night with more at dawn and dusk	6/6/2022 8:12 PM
11	Depends on goal of survey	6/6/2022 7:37 PM
12	Record for longest device allows and subsample after	6/6/2022 8:22 AM

Q4 Daily Programme When should recordings be made?

Answered: 83 Skipped: 1



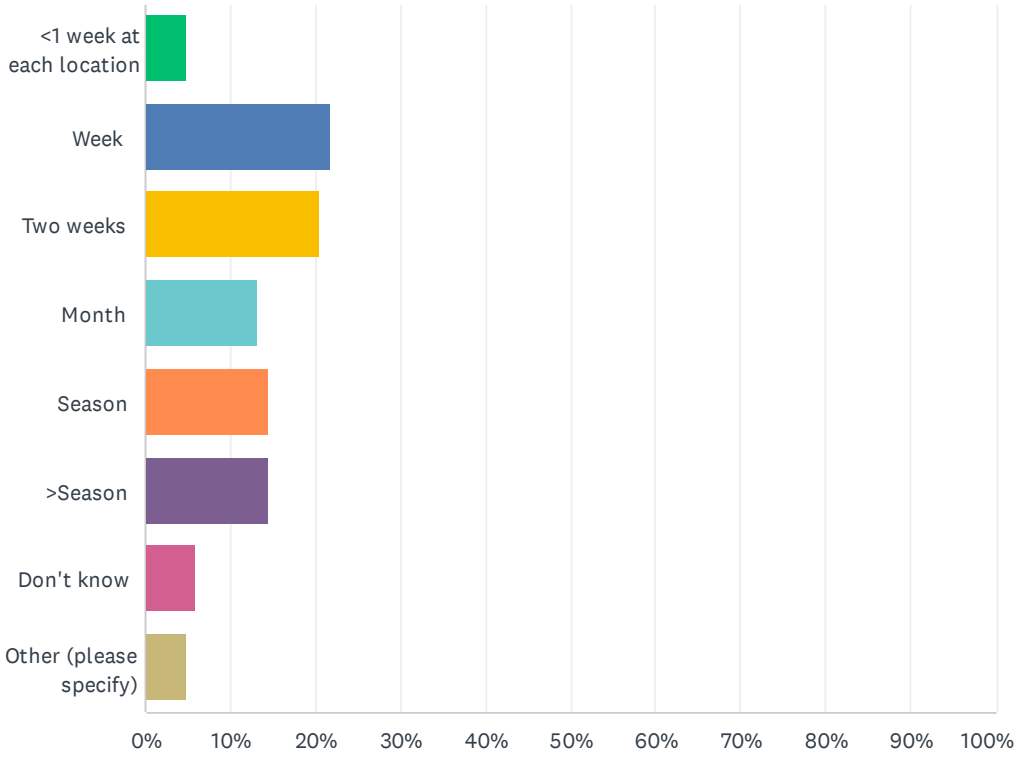
ANSWER CHOICES	RESPONSES	
Full 24 hr cycle	67.47%	56
Daylight hours only	0.00%	0
Night hours only	2.41%	2
Dusk only	0.00%	0
Dawn only	1.20%	1
Dawn and dusk	13.25%	11
Don't know	2.41%	2
Other (please specify)	13.25%	11
TOTAL		83

#	OTHER (PLEASE SPECIFY)	DATE
1	Depends on target taxa	6/16/2022 2:18 PM
2	Dawn, Dusk, Midday and Midnight	6/15/2022 2:24 PM
3	Samples throughout the day and night but not necessarily constant, perhaps sampling every 15 mins for soundscape (not species assemblage analysis)	6/15/2022 8:32 AM
4	depends on the activity of what you're recording?	6/14/2022 5:32 PM
5	depends on activity monitored	6/14/2022 2:45 PM
6	It depends on many things	6/14/2022 1:58 PM

7	At least sample from full 24 hour cycle	6/14/2022 1:45 PM
8	Dawn through early morning, late afternoon through 2h after sunset	6/11/2022 7:36 PM
9	Need more information on aim of project	6/10/2022 9:57 AM
10	Dawn and dusk plus 10 min per hour in other periods	6/6/2022 8:12 PM
11	Depends on goal of survey	6/6/2022 7:37 PM

Q5 Deployment Period Minimum period for a single deployment at each recorder location?

Answered: 83 Skipped: 1

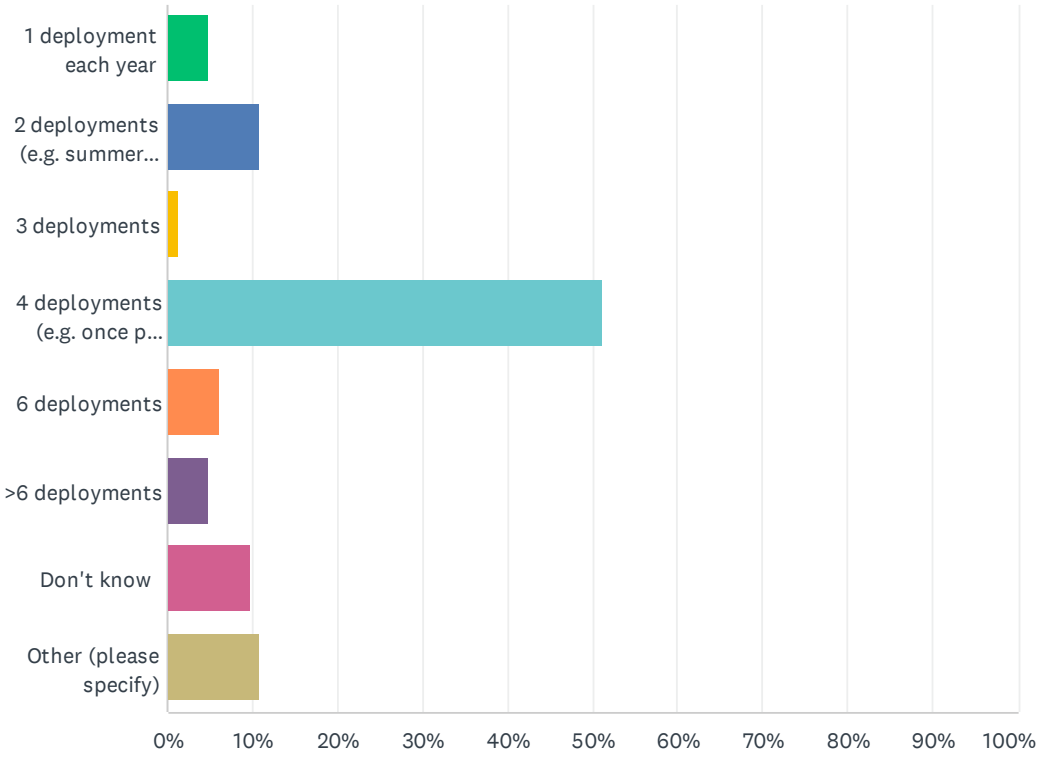


ANSWER CHOICES	RESPONSES	
<1 week at each location	4.82%	4
Week	21.69%	18
Two weeks	20.48%	17
Month	13.25%	11
Season	14.46%	12
>Season	14.46%	12
Don't know	6.02%	5
Other (please specify)	4.82%	4
TOTAL		83

#	OTHER (PLEASE SPECIFY)	DATE
1	Depends on question	6/16/2022 2:18 PM
2	4 months	6/15/2022 9:22 AM
3	Need more information on aim of project	6/10/2022 9:57 AM
4	Depends on goal of survey	6/6/2022 7:37 PM

Q6 Number of Deployments How many deployments at each location per year?

Answered: 82 Skipped: 2



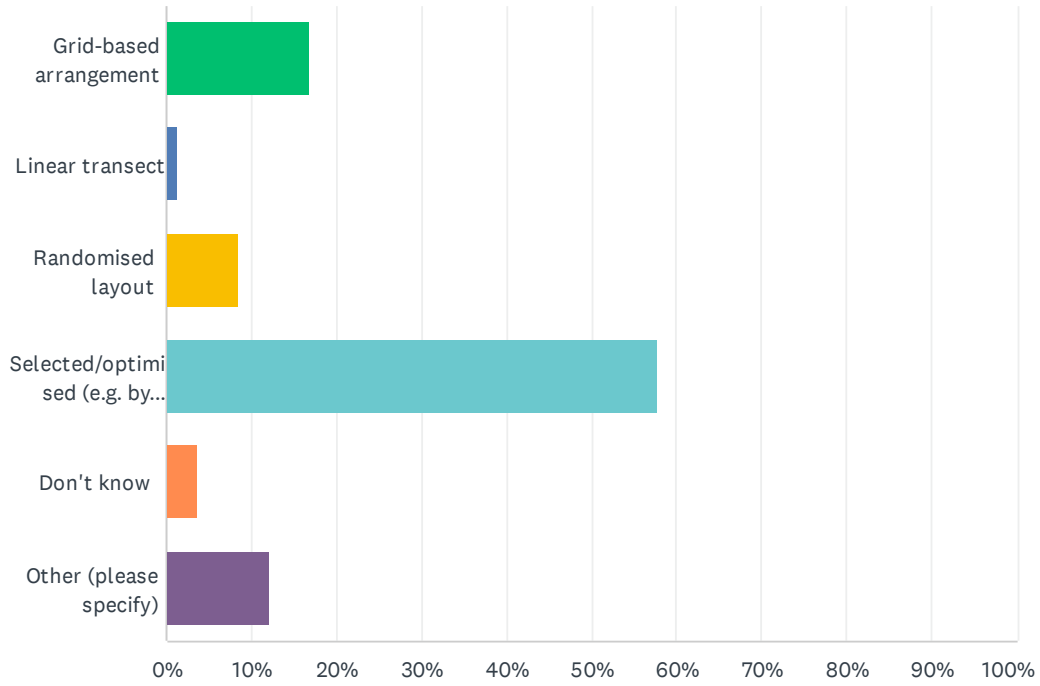
ANSWER CHOICES	RESPONSES	
1 deployment each year	4.88%	4
2 deployments (e.g. summer and winter)	10.98%	9
3 deployments	1.22%	1
4 deployments (e.g. once per season)	51.22%	42
6 deployments	6.10%	5
>6 deployments	4.88%	4
Don't know	9.76%	8
Other (please specify)	10.98%	9
TOTAL		82

#	OTHER (PLEASE SPECIFY)	DATE
1	Depends on question	6/16/2022 2:18 PM
2	Seasonality will have a significant influence on soundscape so I would suggest twice per month. This may be applied regardless of simplicity of site to enable direct comparison against future outcomes (such as with rewilding programmes)	6/15/2022 8:32 AM
3	permanent, or 1x long deployment	6/14/2022 9:58 PM
4	depends on the bat activity monitored	6/14/2022 2:45 PM

5	Minimum of 2 during spring, none or reduced in other seasons	6/14/2022 1:42 PM
6	Depends on most sonically active times of year for sites	6/11/2022 7:36 PM
7	Need more information on aim of project	6/10/2022 9:57 AM
8	Continuous yearlong deployment ideal	6/9/2022 5:52 PM
9	Depends on goal of survey	6/6/2022 7:37 PM

Q7 Spatial Distribution How would you arrange recorders spatially?

Answered: 83 Skipped: 1



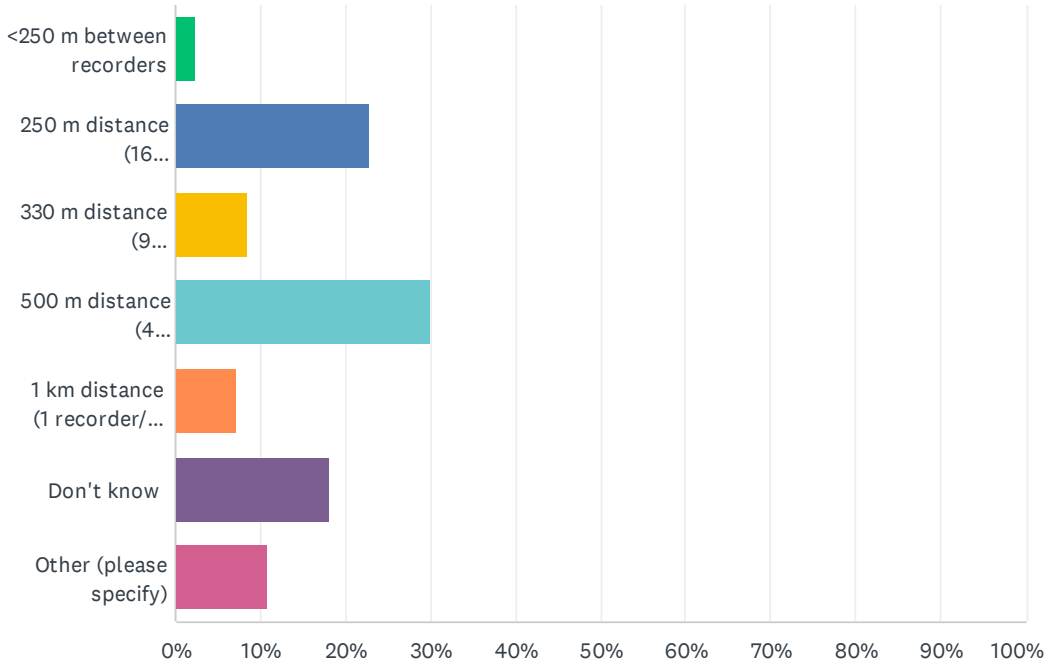
ANSWER CHOICES	RESPONSES	
Grid-based arrangement	16.87%	14
Linear transect	1.20%	1
Randomised layout	8.43%	7
Selected/optimised (e.g. by habitat type)	57.83%	48
Don't know	3.61%	3
Other (please specify)	12.05%	10
TOTAL		83

#	OTHER (PLEASE SPECIFY)	DATE
1	Depends on question	6/16/2022 2:18 PM
2	For comparison with future outcomes, grid based would be best. However, this could be supplemented with habitat specific sample points as well?	6/15/2022 8:32 AM
3	Depends on the reason you are using the recorders	6/14/2022 5:32 PM
4	Groups of N points according to N recorders available / groups on a systematic grid	6/14/2022 1:45 PM
5	Need more information on aim of project	6/10/2022 9:57 AM
6	Stratified random (e.g. by habitat type)	6/10/2022 6:23 AM
7	It depends the accessibility of study area. I would consider "Grid-based arrangement" or " Selected/optimized (e.g. by habitat type)".	6/7/2022 12:37 PM
8	Depends on goal of survey	6/6/2022 7:37 PM
9	Stratified random	6/6/2022 6:41 PM

10	Stratified sample based on ecological gradient (i.e. disturbance, dist to roads, etc)	6/6/2022 6:11 PM

Q8 Recorder Density What (minimum) spacing distance between recorders would you apply?

Answered: 83 Skipped: 1



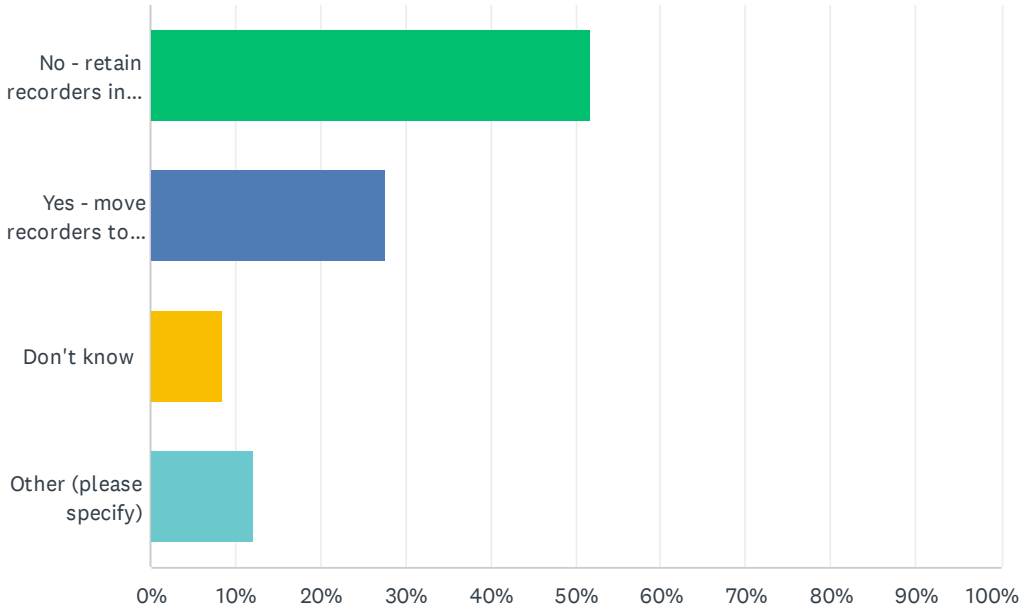
ANSWER CHOICES	RESPONSES	
<250 m between recorders	2.41%	2
250 m distance (16 recorders/km2 if in grid)	22.89%	19
330 m distance (9 recorders/km2 if in grid)	8.43%	7
500 m distance (4 recorders/km2 if in grid)	30.12%	25
1 km distance (1 recorder/km2 if in grid)	7.23%	6
Don't know	18.07%	15
Other (please specify)	10.84%	9
TOTAL		83

#	OTHER (PLEASE SPECIFY)	DATE
1	Depends on question	6/16/2022 2:18 PM
2	Depends on complexity of site and type of monitoring/study undertaken. Likely <250m	6/15/2022 8:32 AM
3	1 recorder inside roost + 1 recorder outside roost typically	6/14/2022 2:45 PM
4	It depends on type of habitat	6/14/2022 1:58 PM
5	Depends on habitat	6/14/2022 1:42 PM
6	Usually at least 250m, but depends on the goal of the study.	6/11/2022 7:36 PM
7	Need more information on aim of project	6/10/2022 9:57 AM
8	depends on species of interest and propagation environment - i would say a propagation analysis should be done for the area and distance determine from that (or at least cylindrical	6/6/2022 9:15 PM

	spreading range and make sure spacing is shorter than that for ability to localize animals over the range)	
9	Depends on goal of survey	6/6/2022 7:37 PM

Q9 Recorder Relocations Would you move recorders between deployment periods to cover a greater number of sites

Answered: 83 Skipped: 1



ANSWER CHOICES	RESPONSES	
No - retain recorders in the same locations for repeat deployments	51.81%	43
Yes - move recorders to different locations after every deployment	27.71%	23
Don't know	8.43%	7
Other (please specify)	12.05%	10
TOTAL		83

#	OTHER (PLEASE SPECIFY)	DATE
1	Depends on question/resources	6/16/2022 2:18 PM
2	bat detectors removed from inside roosts after use (ammonia)	6/14/2022 2:45 PM
3	it depends on the size of the area to be sampled	6/14/2022 2:34 PM
4	Really depends on the area you want to study. Ideally no, but if the area is large and the organisation has "limited means" then I would consider relocating sensos within each season, so that all habitats are sampled at least once per season.	6/14/2022 1:48 PM
5	This would depend on the total area sampled. Ideally repeat developments the same sites, but if the area is large and the number of ARUs is not sufficient moving locations would be required	6/13/2022 9:03 AM
6	Depends on habitat variability and needs of surveyor	6/11/2022 7:36 PM
7	Need more information on aim of project	6/10/2022 9:57 AM
8	Depends on site size. If a small site, then no, best to reuse the same location each time. If site is large and insufficient recorders to cover adequately then might be better to relocate.	6/10/2022 6:23 AM
9	Avoid relocations in small research sites.	6/7/2022 12:10 PM
10	Depends on survey resources	6/6/2022 7:37 PM

Q10 Comments Please provide any comments on the reasons for your choices, or any aspects of ecoacoustic survey that you thing we missed.

Answered: 23 Skipped: 61

#	RESPONSES	DATE
1	I was working from experience in aquatic systems	6/23/2022 5:03 PM
2	For this protocol I've been thinking about what you would need for Acoustic Indices. For species ID you would probably not need something so intensive. For species ID you'd consider the habitat that species is found in, time of day /night it calls, season it calls, KHz at which it calls (which impacts spacing, sample rate). Before a protocol is determined for Acoustic Indices in the UK we need to do the background work of looking at eg, how many hours recording are needed to reduce standard error of AI results, and in different habitats/seasons; also we need a better understanding of relationships between AIs and biodiversity in different habitats	6/15/2022 11:56 AM
3	I don't have technical expertise to answer this survey	6/15/2022 10:23 AM
4	No comments.	6/15/2022 10:05 AM
5	Should focus on the aims, with an openness to future outcomes based survey design.	6/15/2022 8:32 AM
6	The approach needs to be accessible and utilise a reasonable number of recorders which are more or less readily available. The use of highly speciailsed equipment may serve to limit engagement and limit the rate at which data sets can grow. To establish the necessary data rapidly the approach needs to ensure it is accessible.	6/15/2022 8:09 AM
7	Whether I am right remains to be seen.	6/14/2022 11:16 PM
8	I am not experienced in setting these up so answers may be naive. I suggest high sample rate, 24h, longer-term installations to allow for capturing the un-expected. I know it would create a lot of data but some of it can be thrown away - maybe most of it. Some processing on the capture device is one way to achieve this. I think this is simpler and more effective than repeat installations but it does create other issues. It allows for capturing different weather conditions, climate change, special occurrences like natural disasters, and broadening the species captured.	6/14/2022 9:58 PM
9	I don't really know about this stuff.	6/14/2022 2:56 PM
10	96kHz would be better to monitor also bats and insects, not just birds and amphibians.	6/14/2022 2:50 PM
11	Time expansion bat detectors usually used but sometime heterodyne detectors	6/14/2022 2:45 PM
12	My response is based on the parameters stated earlier. The mail constraint was the number of sensors given (5-10). It would have been good to indicate the proposed length of the study (ie, long-term or just a rapid assessment). Knowing that I may have changed some of the suggestions.	6/14/2022 1:48 PM
13	I assumed "single discrete site" is large enough (>10km2)	6/14/2022 1:45 PM
14	It would be useful to have two protocols, one for species composition and one for acoustic indices. This could be undertaken with more sampling during high activity periods such as dusk and/or dawn	6/14/2022 1:41 PM
15	As this is currently framed I think there are too many unknowns. e.g. is this to build up an inventory, to confirm presence/absence of key species? In which case need to understand species accumulation with effort. Or is this about measuring trends, where absolute abundance may be unnecessary and relative changes are adequate, and some level of sampling will be sufficient.	6/10/2022 9:57 AM
16	I think there are important issues for post-collection treatment of recordings that also deserve consideration in any monitoring protocol. I'm planning to mention them in my talk, but in particular: 1. Whether to screen or not for excessive geophony, 2. Confirming enough recordings to capture soundscape variability, and 3. Which indices and best practice for analysis.	6/10/2022 6:23 AM
17	I have no experience remotely monitoring wildlife, but these are my judgments based on long-term monitoring of impulsive noise.	6/9/2022 8:05 PM

18	I would consider recording/compressing to file formats other than WAV - various levels of MP3 compression, have, for instance, been shown to allow for effective biodiversity monitoring and classification when using a machine learning approach.	6/9/2022 6:13 PM
19	It os hard to select among the different options when you are not considering the specific goal, budget limit or other aspects of the study	6/8/2022 1:05 PM
20	Make the data available withim one to five years to the broad scientific community.	6/7/2022 12:10 PM
21	.	6/6/2022 8:12 PM
22	Service logistics is a big deal. If I can drive 10 minutes and hike 5 more to swap cards/batteries on a sensor, it's much more attractive to run a more dense duty cycle. If it's a windy environment, a HPF is a must.	6/6/2022 6:11 PM
23	Acoustic surveys are so varied that I would have to use different answers for every project. For example bats (nocturnal) vs diurnal mammals vs songbirds (dawn chorus).	6/6/2022 12:06 PM