# WIA Consultation Number 2024-2:

# 40m Band Plan Harmonisation – Round 1 Outcomes Paper

18th September 2024

Revision 1.0

The WIA 40m band plan harmonisation project has generated a substantial amount of discussion and feedback from the amateur radio community. The following paper is a summary of the project to date and the feedback received. It also describes the next steps expected in the project. This is just the beginning of what will be a lengthy process, given that for any change to be accepted, it is necessary to build consensus and agreement on the best way forward.

## *Introduction*

For many decades now, the amateur service has voluntarily sought ways of managing how the amateur radio spectrum is used, to minimise interference between different modes of operation. This is achieved by defining agreed spectrum use plans (Band Plans) that divide amateur spectrum into segments for different activities to reduce the chance of interference being caused between disparate operating modes.

These plans, coordinated through the International Amateur Radio Union (IARU) (of which the WIA is the representative body here in Australia), are intended as guidelines that all radio amateurs are invited to respect and follow. They are intended to reduce on air conflict and operate as an agreement among gentlemen to show respect for each other's interests.

Band plans are also multi-tiered, with the top tier being the regional plans being established by the IARU. These are then converted into domestic plans, when required, in cases where domestic regulation may apply additional restrictions to the amateur spectrum in a given country. There are some basic principles underlying the IARU Region 3 Band Plans in these circumstances which are:

*(1) In all cases of conflict between a band plan and the national regulations of a country, the latter shall prevail.*
*(2) Nothing in these band plans shall be construed as prohibiting different national arrangements, provided that harmful interference is not caused to stations in countries operating in accordance with the regional band plan.*
*(3) Notwithstanding item (2) above, Member Societies of IARU Region 3 are strongly urged to use these regional band plans as a basis for their national band plans.*

It is also true that band plans are not legally binding. If all you want to do is operate purely from a legal perspective then you need to only follow Clause 15(1) of the Australian Amateur Class Licence, which states that "A person must not operate an amateur station if its operation causes harmful interference to radiocommunications". However, such an approach would be considered quite anti-social and is most certainly not encouraged.

## *Why Harmonise the 40m Band Plan?*

The project began after witnessing growing amounts of conflict on the band, particularly within the data mode segments and adjoining voice and CW segments. Preliminary research showed that there was a large disparity between various national verses the IARU band plan, particularly

in region 3. This was the starting point which led to the question, “Is there a way to better harmonise the 40m band plan” at least regionally, if not globally. That also led us to consider whether the band plans today still struck the right balance of allocated spectrum space per mode. As the 40m band plan has not been revised in well over a decade and noting the explosion of interest in digital modes in that time, it was felt that a discussion about how to determine a fair share of spectrum for each interest group had to be part of the process.

### *The Intended Process*

It was always our understanding, given we had initiated the work at a regional level, that the issue would need to be progressed on a wider stage. We, therefore, always expected that it would require global engagement through IARU Region’s 1 and 2 to succeed and that this will take some time.

The path we chose was to begin with an initial WIA discussion paper directed to IARU Region 3 member societies, WIA members and other interested radio amateurs. The initial paper’s goal was to make the case for change and present several illustrative design options for people to consider, so we could gauge early sentiments from the community. The intent of these options was to highlight how potential ideas might work, rather than to present a final proposal up front.

Next, based on that feedback, the plan was to prepare a revised paper, incorporating the feedback from the first, for further discussion and subsequent presentation at the IARU Region 3 Conference in November. At that conference, the WIA proposes to raise a motion requesting IARU Region 3 to sponsor the establishment of an inter-regional IARU committee to take the work forward globally.

### *Round 1: A summary of the approach taken*

The aim of the initial WIA paper was to gather feedback from the community on the issues presented, rather than just develop ideas behind closed doors. We approached this by presenting a case for action, considering evidence of existing arrangements and then looking at potential solutions to the initial problems identified, all with the aim of promoting feedback and discussion. It was clear to us that two main questions needed to be asked:

1) How do you determine how much spectrum each mode should be allocated?

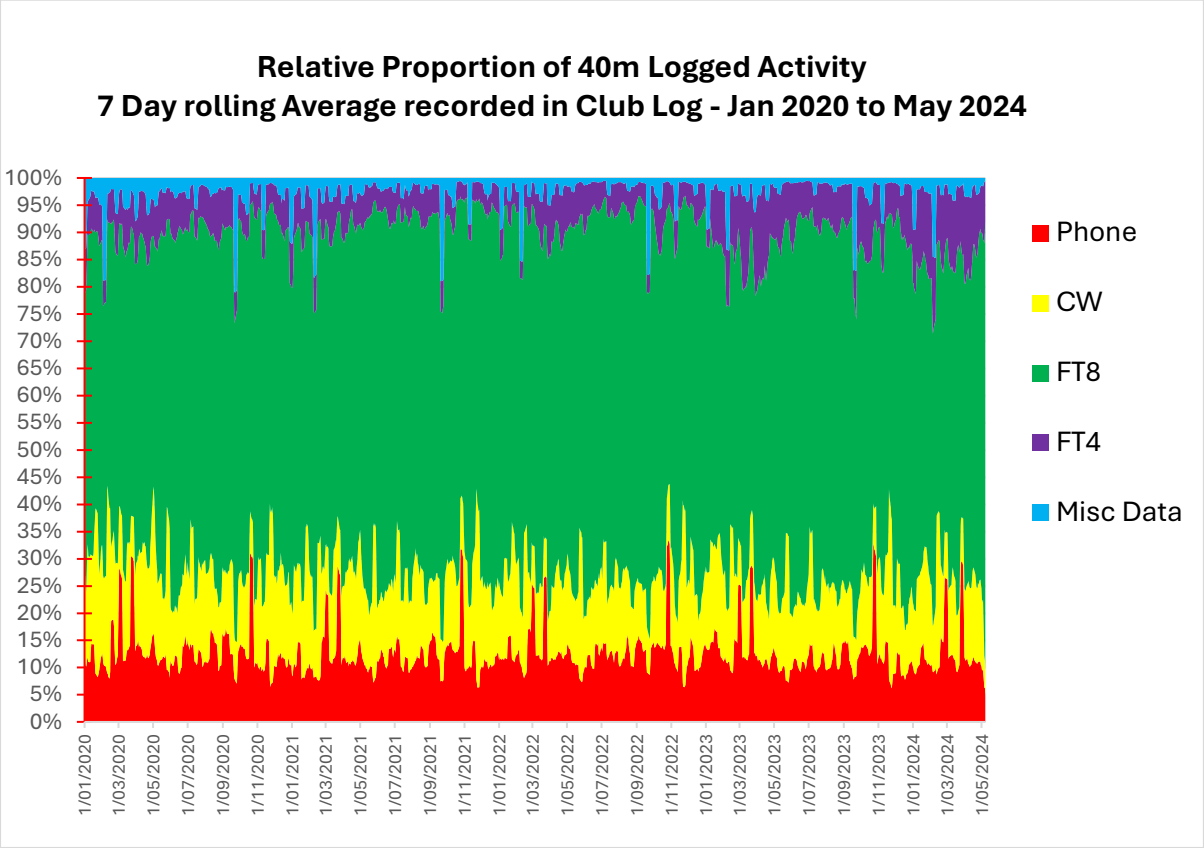
2) Where in the band should those allocations be made?

To answer question 1, we sought to develop a simple model of amateur spectrum demand using a bandwidth corrected proportional allocation of spectrum, based on the percentage of amateurs interested and actively using each particular mode. We defined use as “logged a contact in the public domain.”

Our goal was to find a fair and impartial way of determining relative activity levels between modes. This meant we needed as complete a data source as possible that contained time consistent data for all three major operating modes. We considered sources like “PSKReporter”, “The Reverse Beacon Network” and the “DX Cluster networks” as well as logging platforms such as Clublog, LoTW and others, before settling on the Clublog database.

We chose Clublog because it contained data for all three mode categories in a time consistent manner. What is more, it was one of the few that made that wide a data set available for statistical analysis. To develop the “percentage relative interest” view, we then considered the daily proportion of logged CW, Data and Voice modes in the Clublog system, and by running a

rolling 7-day smoothed average over the data, determined an “average relative usage percentage” for each of the logged modes.




The risk, identified at the time, was that we did not know how heavily biased the data might be towards the DXing community verse local nets, local chat and other unlogged data type activities that also occur on the band. Our initial perception was that we risked disadvantaging the Voice operators more than the others, given that net traffic (often conducted on voice modes) and general local rag chewing typically would not have been logged in Clublog, even by regular Clublog users. We fully expected, therefore, that some of the assumptions and proportions would need to be tuned once we received feedback from the community.

In answering question 2, we initially built several views, based in part on some early research conducted for an earlier multi-regional IARU project that did not progress (which originally aimed to consider whether there was a better distribution of activity interests possible within the data sub-band only). We have subsequently used information gained from that project to develop some of the proposals in this paper, although we did identify a risk that these views were based on data sourced from outside of IARU Region 3. None the less, we felt that it was still worth testing to see if people thought it was relevant here.

(We also wish to clarify a key misconception we received on this early work too, regarding the specific discussions with the ARRL and the WinLink communities on their views of EmComm use of WinLink in Region 2. That project did not include sharing any of the current WIA proposals with those groups. Some have misconstrued what we said to believe otherwise, heightening their anxiety that their own views have been ignored. I apologise for creating that impression, as that most certainly wasn’t what happened, nor was it our intention).

### *Round 1: Feedback Received*

The feedback we have subsequently received from the discussion paper has been substantial. We have had well over one hundred responses from a variety of individuals and interest groups, many of which took the time to answer the specific questions we asked as well as provide their thoughts on the three draft band plans that were put for discussion. So, what did we learn?

In response to Question 1 – most people agreed that there was merit in pursuing harmonisation of the 40m band plan.

Regarding Question 2, here we received considerable opposition to our approach. Specifically:

- Most people did not agree that our models of relative activity levels between different interest groups were valid. Many people particularly from the CW community, argued that Clublog was not being used widely enough and that it wasn't capturing many of the QSOs that occur on the band every day. Some commented that our study period of Clublog data (that we described in the paper) was not long enough nor did it cover enough of the year to capture all propagation conditions.

- Lots of data was also received particularly highlighting certain centres of activity by CW operators, particularly the QRP centre of activity on 7030 kHz. They also called out that the proposal would disenfranchise Tech and General class USA amateurs who did not have access to CW below 7025 kHz (an oversight on our part because of our Region 3 focus, for which we apologise).

- Commentary about the level of pirate interference particularly on the lower 20 kHz of the band was also received, which, we acknowledge was a consideration that had been overlooked in the initial WIA discussion paper. (Effectively we will need to consider "available spectrum" not "allocated spectrum" as a baseline and allow for a percentage of unusable spectrum to be factored in due to such uncontrollable interference).

Throughout most of the replies, there was also a common theme from the CW community seeking to justify the retention of 40kHz for CW on an "absolute traffic basis". Some also argued that CW channel bandwidths of 500Hz to 1kHz should have been considered rather than the 400Hz used in the study. However, few seemed prepared to consider that ask in the context of whether that was a fair outcome for all (not just CW operators), and none were able to provide any evidence of the relative activity levels across the different modes used on the band showing how CW was more or less active than other modes.

The committee also noted several calls for us to consider the ITU method of assessing band occupancy as an alternative to our proportional activity approach. This is something the committee has given some early consideration to, although our initial thoughts are that while the approach may have some merit, we feel that to attempt such a project, support would be needed from the other IARU regions so that the required monitoring and data can be collected uniformly across the globe.

Answers to the other questions we asked indicated that:

- Few see value in supporting specific emergency communications band segments, at least from an Australian perspective.

- Proposals to provide different segments of the band for "voice" net activity as opposed to "DXing" were almost universally not supported.
- Suggestions to steer "contesting" activity into potentially less disruptive outcomes for non-contesters were not supported. Typically, the responses included the observation that few contest organisers would be willing to set suitable rules, and indeed one observation received about the RSGB contests (where such mechanisms are used) suggested that it was in fact detrimental to band congestion within the contest area of activity
- Opinion was mixed on whether the voice segment should include both analogue as well as digital voice modes in the future although many were favourable. A good suggestion received was to encourage digital voice operation to use the very top of the band, although we see problems with this given that some USA licensees can only access 40m above 7175 kHz for analogue voice today
- The majority also supported avoiding breaking sub-bands into lots of little interest group segments. Many who answered this question recognised the inefficiencies that could cause.

In addition to the answers to our specific questions, one of the common themes expressed was that some felt that the proposals were too complex and thus would not be respected or followed. There were calls to keep it simple.

There were also several points that appear to have been misunderstood by the audience that need to be clarified. Specifically:

- *we were challenged on why the 7200-7300 kHz band segment was not included in our deliberations.*

  Our response to this is simply that this paper was written with an ITU Region 3 focus, not an Australian or New Zealand perspective. This is important because, in ITU Region 1 and 3, the amateur 7 MHz allocation is only defined from 7,000-7,200 kHz.

  The 7200-7300 kHz segment is only available in Region 3 within Australia and New Zealand, and then only on a secondary basis. Any globally harmonised plan, therefore, cannot consider the spectrum above 7,200 kHz, simply because many countries of the world do not have access to it.

  It is worth noting that in the future, we would expect eventually to produce an Australian domestic variant of any new IARU plan which would include the 7,200-7,300 kHz segment within Australia, but we are a long way from that point right now.

- *we also received criticism that we had not consulted with group X, Y or Z before publishing the initial paper"*

  In response, we simply want to re-iterate that one of our motivations at the very start of this process was to find ways of making it as open and fair to all. That included providing equal access to information and a common channel and timeframe for people to provide responses, in ways that did not establish bias or discriminate one interest group over another.

  To that end, no one group was approached prior to the consultation for specific preliminary views. We trust that people appreciate the value of this open and

transparent approach we have taken. It is why the process is also multi-staged, so that in response to the presentation of our preliminary ideas, a wider body of opinion can be gained, unbiased by our own decisions on who we might choose to consult with.

### *Next Steps*

So, where to from here? In preparing the stage 2 paper, it is clear a change of direction is required, based on the feedback received. For now, we will need some time to consider what has been said and will consider alternative ways forward.

The next steps, therefore, are to produce a second paper for people to consider, building on the first and incorporating the data received from the community. That work has now begun. We will release the next paper as soon as it is ready, in time for both public consideration as well as inclusion in the IARU Region 3 conference proceedings in November.

Meanwhile, we would like to thank everyone who has engaged with the process so far, particularly those who engaged in a constructive way. We also encourage people to continue to participate in the discussions as the future directions are developed. Remember, this is only the beginning, and your inputs are important!

73 de Grant VK5GR
WIA Technical Advisory Committee Chairman