

2016 Oceania DX Contest - Analysis

QSO activity

Chart 1 below shows the annual trend in the total number of QSOs logged by Oceania entrants (excluding SWL logs) while Charts 2 and 3 show the trend broken down by band for the PHONE and CW sections respectively. Chart 4 shows the annual trend in 10.7 cm solar flux and planetary geomagnetic activity (A index) on the Oceania DX Contest weekends since 2001.

A total of 50,590 QSOs were recorded in the Oceania logs. This is 5% more than the number of QSOs logged in 2015 but still well down on the 68,660 QSOs that were logged in 2014 at the peak of the solar cycle. Compared to 2015 there was a 3% decrease in the number of PHONE QSOs logged and a 22% increase in the number of CW QSOs.

The average solar flux index over the PHONE weekend dropped from 92 in 2015 to 81 in 2016. Geomagnetic conditions were also somewhat unsettled with the A index reaching a maximum of 15 over the PHONE weekend. The reduced solar activity and unsettled geomagnetic conditions explains why many entrants made comments about difficult conditions in the PHONE section. Chart 2 indicates that the poor conditions had a significant impact on 20M PHONE activity, with the relative level of activity on this band dropping to the lowest level recorded in the past 14 years.

Conditions were more favorable on the CW weekend. The solar flux climbed to 104 and the geomagnetic conditions were more settled with an A index of 6. Compared to 2015, there was more activity on both the 20M and 15M bands. However, the increased activity on the higher bands also meant that stations spent less time on the 80M and 40M bands.

As expected at this part of the solar cycle, there were not many 10M QSOs. Apart from a few QSOs with **RJ4P**, all of the intercontinental 10M QSOs in the PHONE section were with Asian stations. The situation improved on the CW weekend where the additional solar activity enabled a number of QSOs with Asian, North American and European stations.

The 160M band also seemed to be in poor shape. Almost all of the 160M QSOs were between Oceania stations. There were no intercontinental 160M QSOs in the PHONE section and the only intercontinental 160M QSOs in the CW section were with **LY2XW** and **HSOZIA**.

Participation

Charts 5 to 11 below summarise the participation trends in the 2016 OCDX Contest. Chart 5 shows the trend in the number of logs submitted (including check logs) since 2000, while charts 6 and 7 provide a breakdown of this trend by continent for the PHONE and CW sections respectively. Charts 8 and 9 provide a breakdown of the trend by country within Oceania. Chart 10 identifies and compares the top 20 countries that submitted the most logs in the 2016 contest. Chart 11 compares the number of logs submitted for each entry category in the 2016 contest.

A total of 1192 logs were received for the 2016 contest, consisting of 626 PHONE logs and 566 CW logs. This is 23 logs (approximately 2%) more than the number received in 2015. It is also a good outcome considering the difficult conditions that plagued the PHONE section. Although the number of PHONE logs dropped by 5%, this was more than offset by a 10% increase in the number of CW logs. Nonetheless, the total number of logs is still 67 less than the record number of 1259 logs received in 2011.

The poor conditions in the PHONE section mainly impacted European participation. The number of PHONE logs from Europe decreased by 36% - from 232 in 2015 to 149 in 2016. Making QSOs between Oceania and European stations can be challenging at any time, but it was clearly more challenging than usual over the

PHONE weekend.

The good news is that participation from Oceania and Asian stations was noticeably greater in the 2016 contest. The total number of Asian logs received was 319, a significant step up from the 269 logs received in the 2015 contest. This is a new record for participation from Asian stations. The total number of Oceania logs received was 364, up from 313 in the 2015 contest. This represents a 17% increase and sets a new record for Oceania entries in the contest. Compared to 2015, there was a 16% increase in the number of Oceania PHONE logs and an 18% increase in the number of CW logs.

Charts 8 and 9 show that most of the growth in Oceania activity is due to increased participation by Indonesian stations. Compared to 2015, the number of Indonesian PHONE logs increased by 53% to a total of 124 and the number of CW logs increased by 61% to a total 34. It is also interesting to note that the number of Indonesian PHONE logs is now 47% of the total number of Oceania PHONE logs. This is in contrast to the situation in earlier years where Indonesian logs only represented a small fraction of the Oceania log entries. The ongoing efforts of **YBONDT**, the **YB Land DX Club** and others to promote the contest in Indonesia are clearly continuing to have a positive impact in attracting new participation from Indonesian amateurs.

It is also pleasing to see a marked increase in the level of participation from stations in the Philippines, East Malaysia and Hawaii.

The ongoing upward trend in participation from Oceania stations is very encouraging, considering that Oceania participation is essential for attracting more participation from stations outside Oceania and continuing to grow the contest.

The not so good news is that there was a notable decline in participation from Australian PHONE stations in the 2016 contest. Compared to 2015, the number of Australian PHONE logs declined by 25% from 113 to 85. Participation from New Zealand stations has also been relatively flat over recent years. The contest committee will continue working with the Australian and New Zealand contest and DX communities to see what can be done to turn around this trend for the 2017 contest.

The activation of stations in the rarer Oceania countries, including DX expedition style operations, makes the contest more interesting and is an important draw card for attracting participation, especially from stations outside Oceania. The contest committee will also be seeking to promote more activity from rarer entities in the 2017 contest.

The actual participation in the contest is always much greater than that indicated by the number of logs submitted. There were at least 3,880 stations in the PHONE section and 2,168 stations in the CW section that made one or more QSOs but did not bother submitting a log. More significantly, there were at least 15 stations in the PHONE section and 12 stations in the CW section that made 50 or more QSOs but did not submit a log.

The low power categories continued to be most popular with 50% percent of the entries being in one of these categories. Overall, the SO ALL LP category was the most popular category. The next most popular categories (in order of popularity) were the SO ALL HP, SO 40M LP, SO 15M LP and SO 40M HP categories. Despite the challenging conditions, it is pleasing to see 51 entries in the QRP categories. This is an increase of 34% compared to 2015 and sets a new record for the number of QRP entries. It is also pleasing to see an increase in the number of entries in the multi-operator categories, up from 33 in 2015 to 44 in 2016. Multi-operator entries tend to have better equipped stations so they are helpful for driving QSO activity. They can also be a useful learning environment for introducing newcomers to the contest and contesting more generally.

Total QSOs

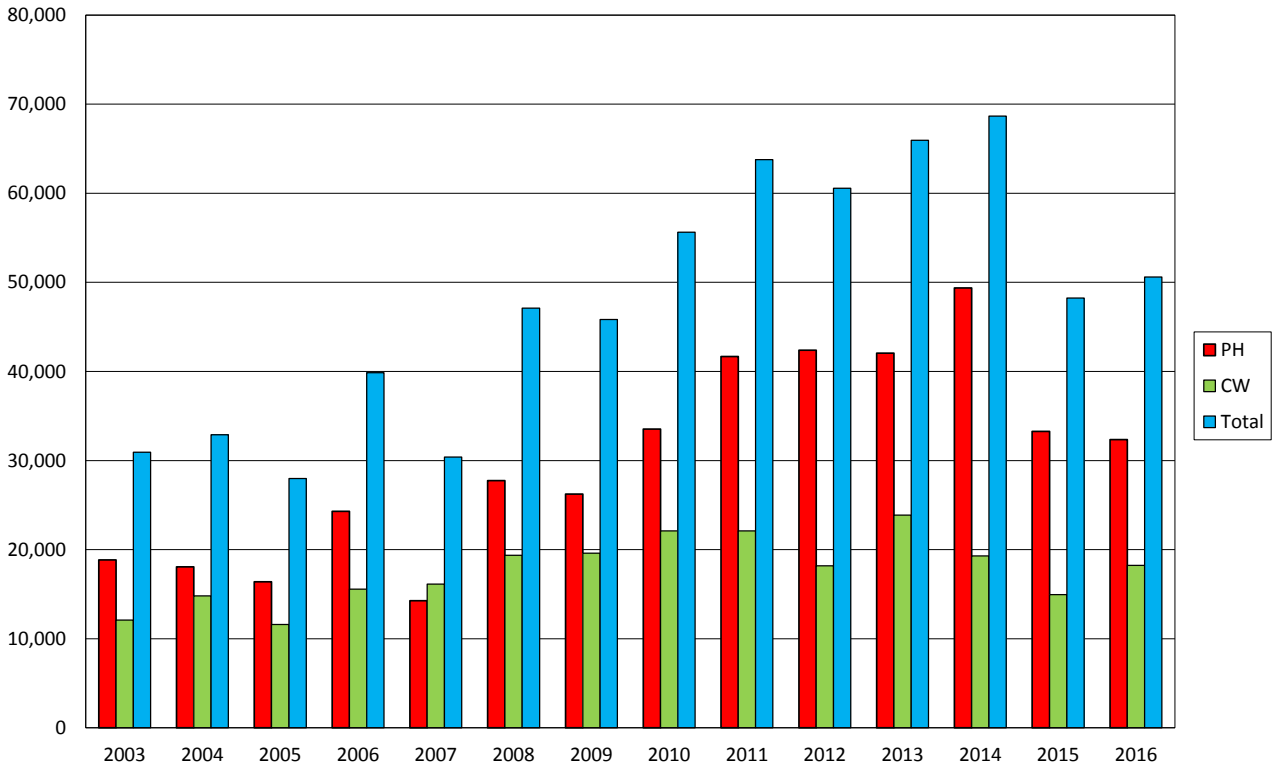


Chart 1: Number of QSOs in Oceania Logs

PHONE QSOs

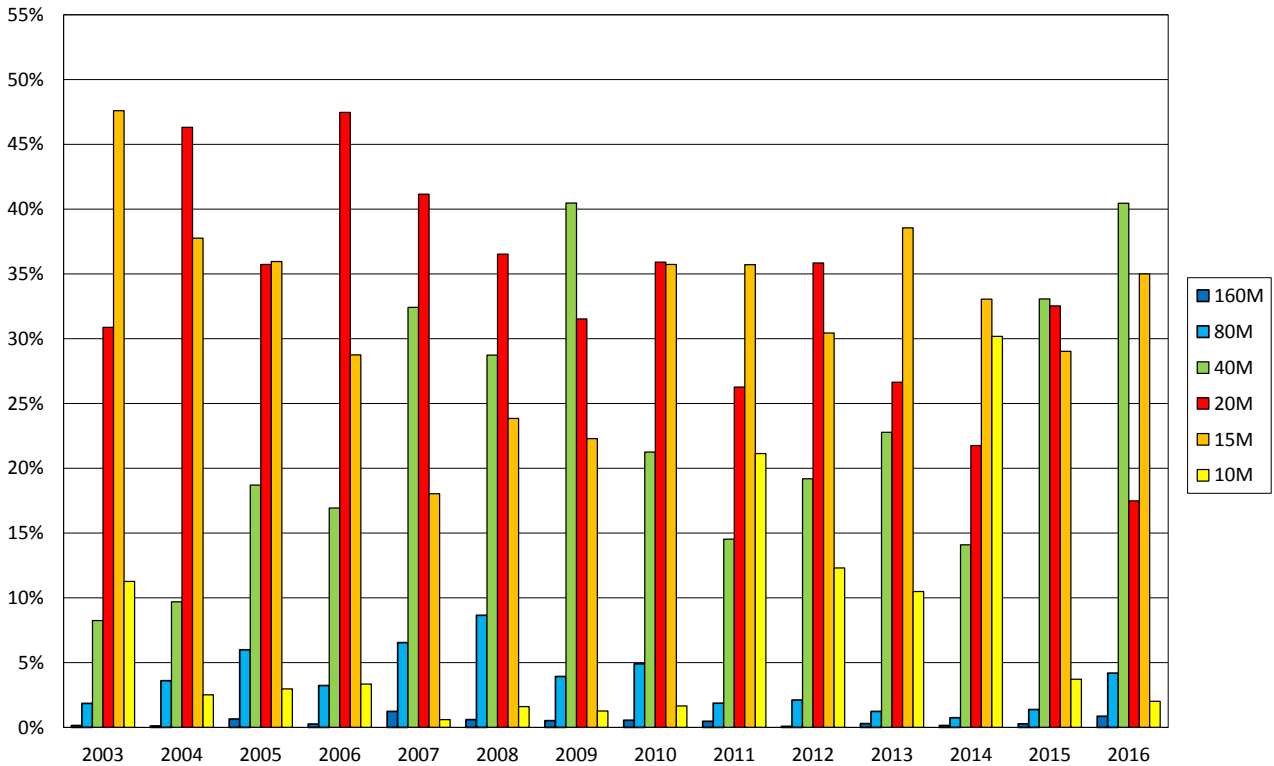


Chart 2: Band Analysis of PHONE QSOs in Oceania Logs

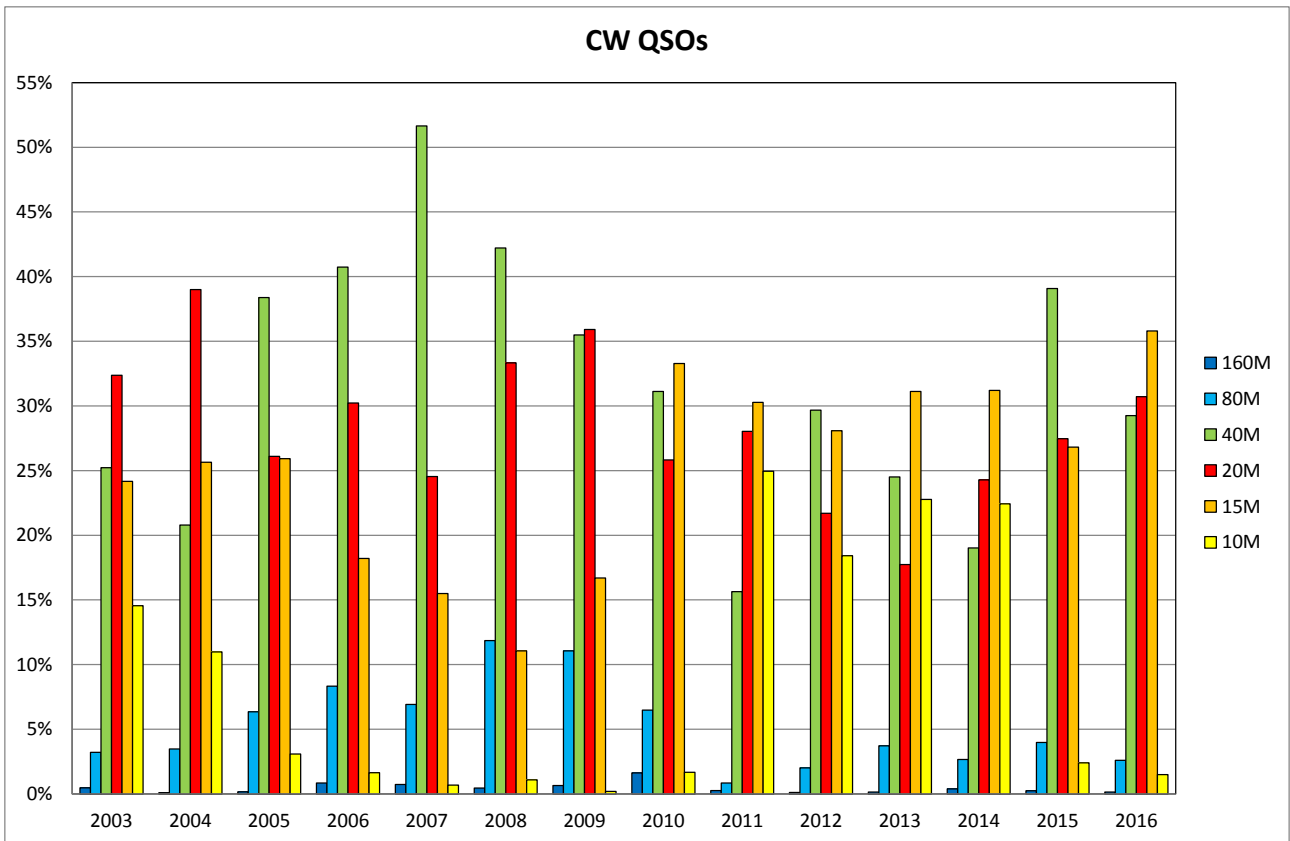


Chart 3: Band Analysis of CW QSOs in Oceania Logs

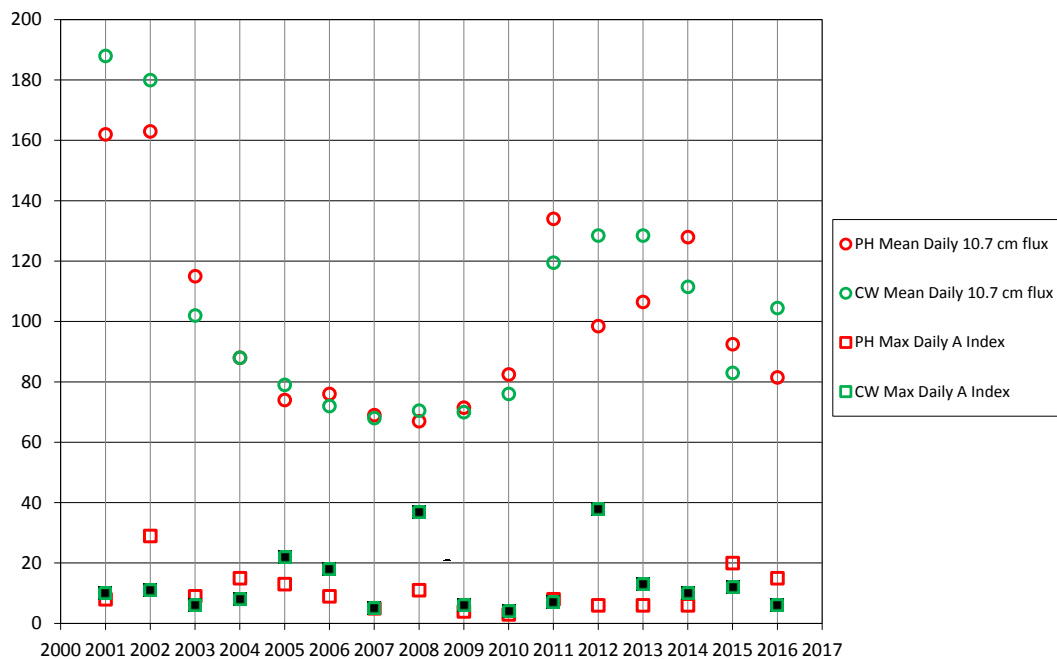


Chart 4: Solar and Geomagnetic Conditions on OCDX Contest Weekends¹

¹ Data Source: NOAA <ftp://ftp.swpc.noaa.gov/pub/warehouse/> . HF propagation conditions are related to the level of 10.7 cm solar flux radiation and the level of geomagnetic storm activity as measured by the daily planetary A index. Higher values of flux generally increase the maximum usable frequency while higher values of the A index are often accompanied by increased absorption (especially at high latitudes), a reduction in the maximum usable frequency and elevated noise levels.

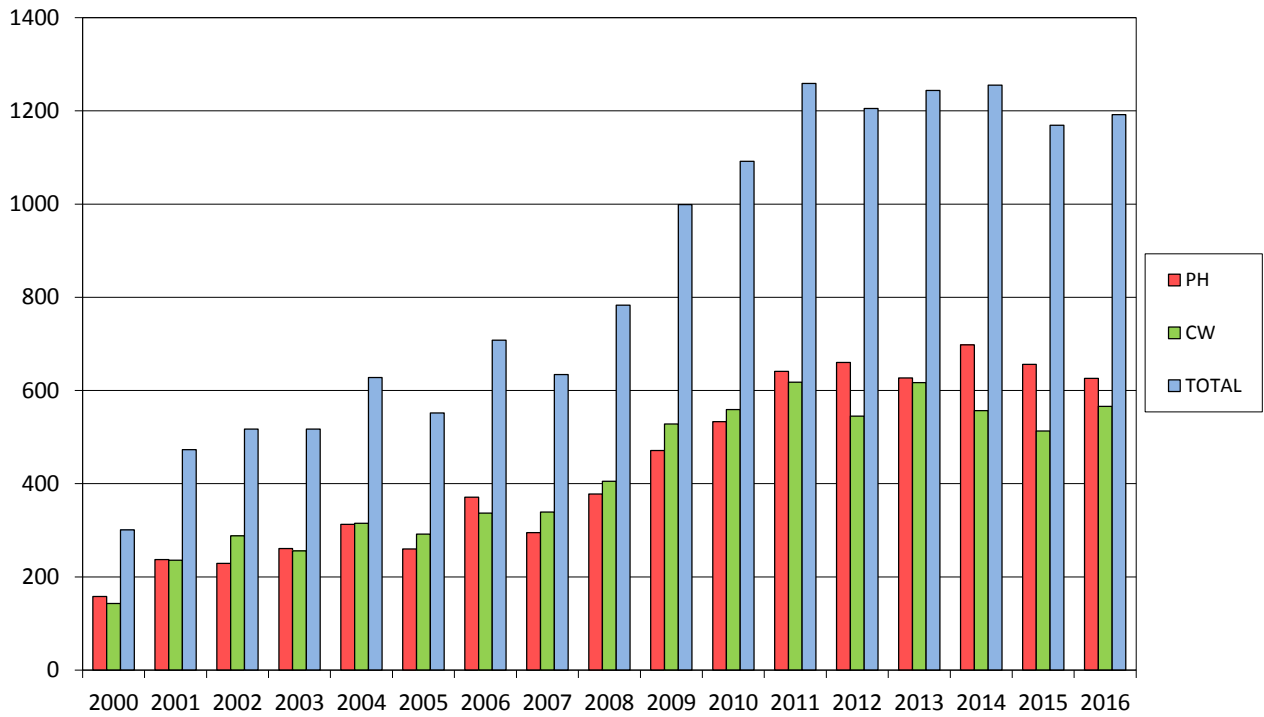


Chart 5: Number of Logs Received (including check logs)

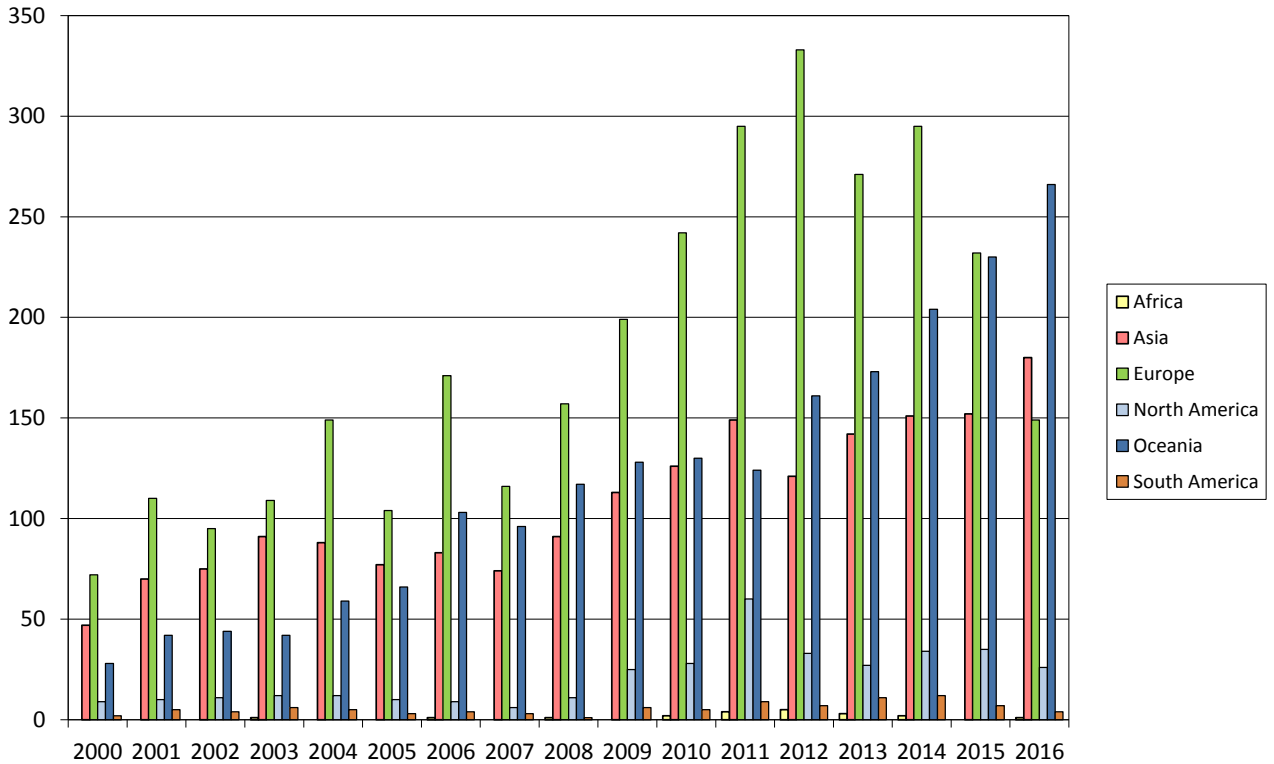


Chart 6: Number of PHONE Logs Received - Grouped by Continent

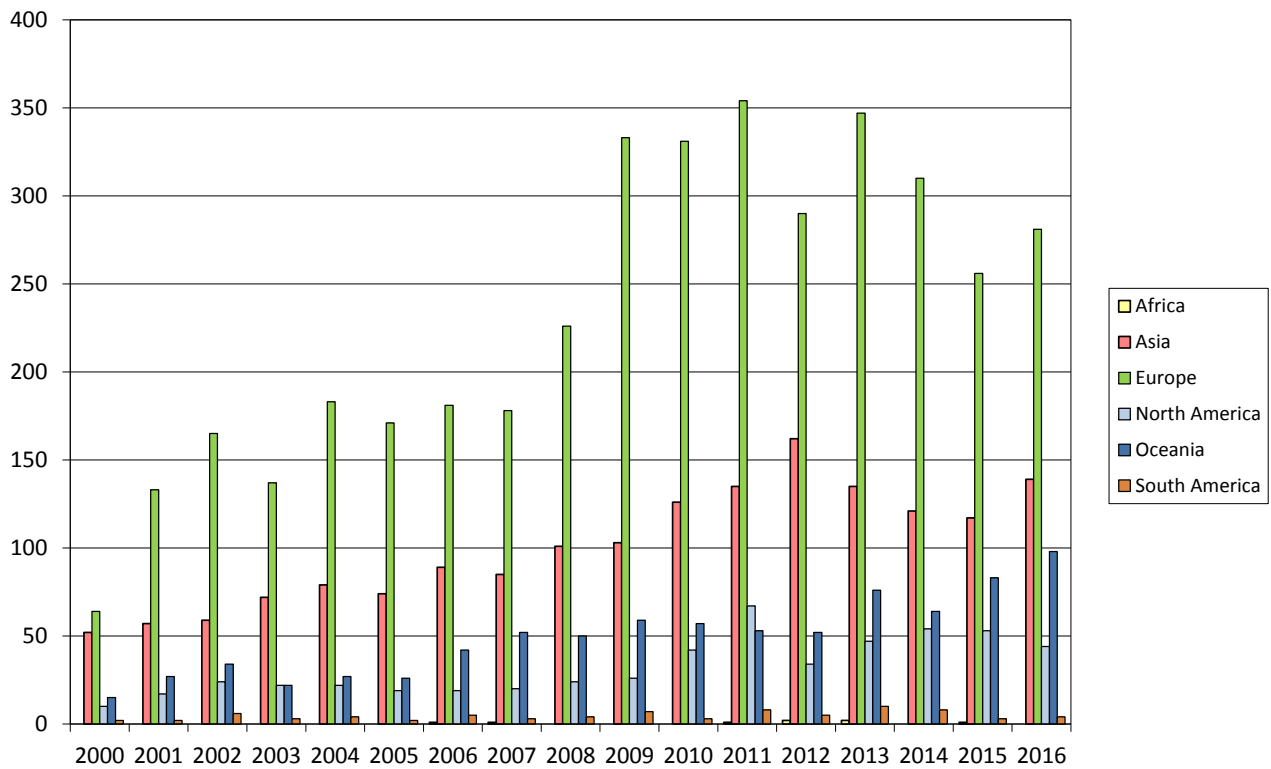


Chart 7: Number of CW Logs Received - Grouped by Continent

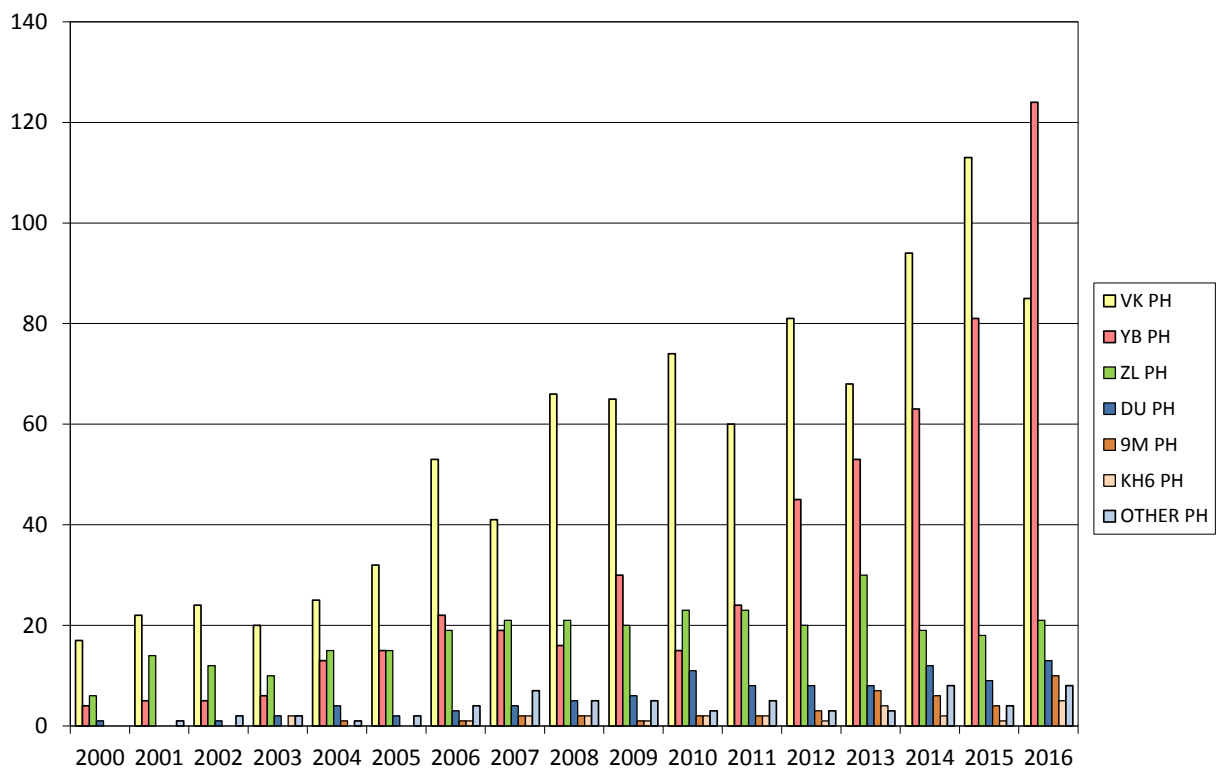


Chart 8: Number of Oceania PHONE Logs Received - Grouped by Country

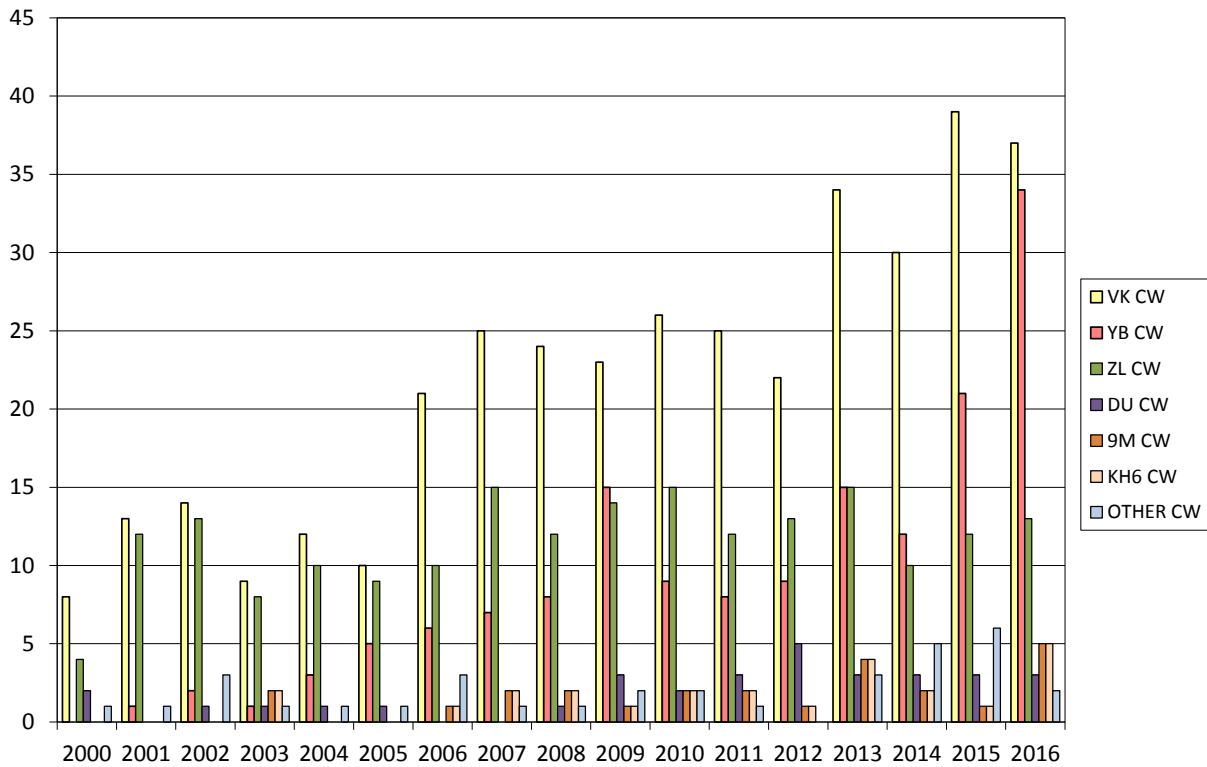


Chart 9: Number of Oceania CW Logs Received - Grouped by Country

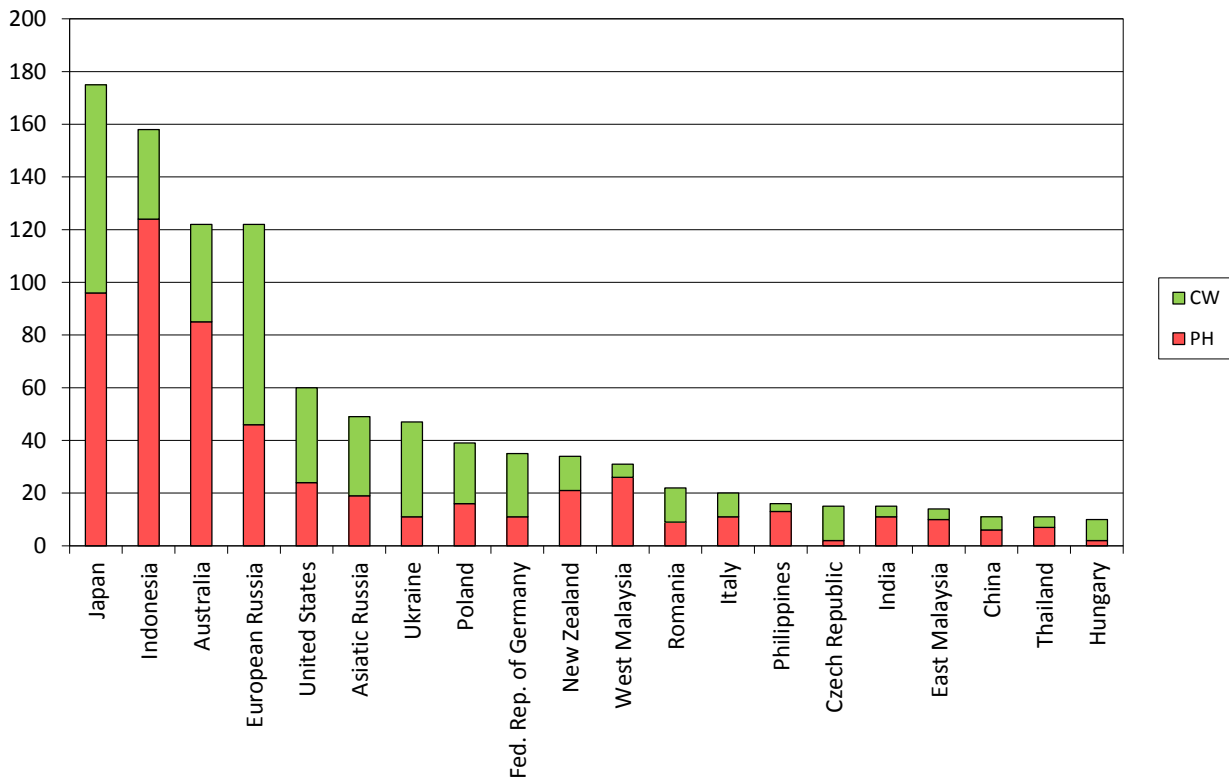


Chart 10: Number of Logs Received – Top 20 Countries

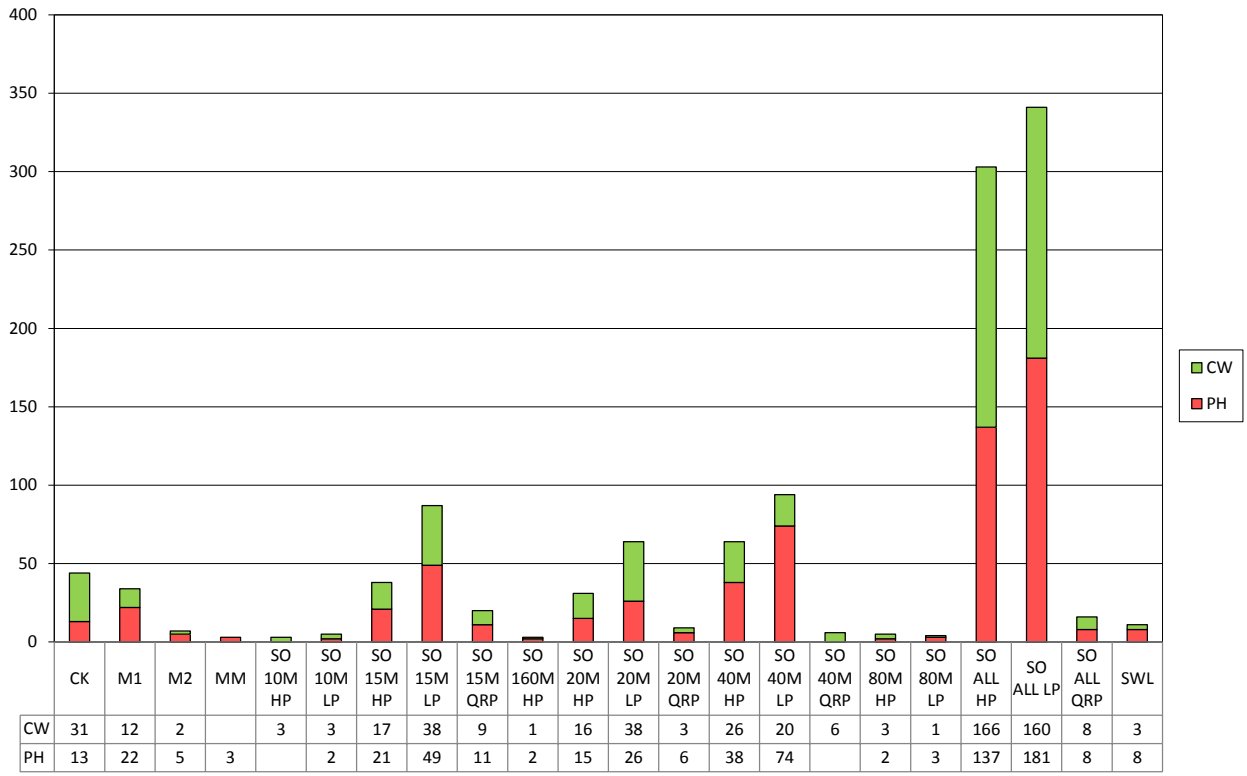


Chart 11: Number of Logs Received – Grouped by Category