

# 2015 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.

The total number of QSOs logged in 2105 was 48,242. This is 30% less than the record number of 68,660 QSOs that were logged in 2014. It represents a 33% decrease in the number of QSOs logged in the PHONE section and a 22% decrease in the CW section. Charts 2 and 3 show that the decrease is largely due to a dramatic fall in the number of QSOs logged on 10M. The percentage of QSOs on 10M in the PHONE section decreased from 30% in 2014 to 4% in 2015, and in the CW section it decreased from 22% to 2%.

The reduced QSO numbers on 10M can be directly attributed to the decline in solar conditions since the 2014 contest. 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. The average solar flux index over the PHONE weekend dropped from 128 in 2014 to 92 in 2015 and over the CW weekend it dropped from 111 to 83. Additionally, the geomagnetic conditions were less settled in 2015 with the A index reaching a maximum of 20 over the PHONE weekend and 12 over the CW weekend.

The poor conditions on 10M meant that entrants spent more time on the lower bands. Activity on 80M, 40M and 20M was up compared to 2014, with the majority of QSOs being logged on the 40M band. The trend for QSO activity to move from the higher bands to the lower bands can be expected to continue over the next few years as we head towards the next minimum in the solar cycle.

Conditions appeared to be poor to average on the 80M and 160M bands. High QRN levels from local electrical storms made it difficult for many Oceania stations to copy signals on these bands during the CW contest. The QSOs on the 160M band were mainly between Oceania stations, and the only intercontinental QSOs were with a few North American and Japanese stations.

## Participation

Charts 5 to 11 below summarise the participation trends in the 2015 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 2015 contest. Chart 11 compares the number of logs submitted for each entry category in the 2015 contest.

A total of 1169 logs were received for the 2015 contest. This is 86 logs (approximately 7%) less than the number received in 2014 and 90 logs less than the record number of 1259 logs that were received in the 2011 contest. Compared to 2014, the number of PHONE logs dropped by 6% and the number of CW logs dropped by 8%.

Again, this fall in the number of logs received can be largely attributed to the poorer conditions over both contest weekends. It appears that European stations were mainly affected as the number of logs from Europe decreased by 19% from a total of 605 in 2014 to 488 in 2015. Making QSOs between Oceania and European stations can be challenging at any time, but it was clearly more challenging than usual in the 2015 contest.

The good news is that participation from Oceania stations was noticeably greater in the 2015 contest. The total number of Oceania logs received was 313, up from 268 in the 2014 contest. This represents a 17%

increase and sets a new record for Oceania entries in the contest. Compared to 2014, there was a 13% increase in the number of Oceania PHONE logs and a 29% increase in the number of CW logs. Inspection of the breakdown by country shows that the increased Oceania activity is almost entirely from Australia and Indonesia.

This ongoing upward trend in interest from Oceania stations is very encouraging, noting that Oceania participation is essential for attracting more participation from stations outside Oceania and continuing to grow the contest. Promotion of the contest by clubs is clearly playing an important role in driving participation from Australian stations, judging by the number of Australian groups participating in the multiple operator (M1, M2 and MM) categories is growing and the large turnout of members in single operator categories from the **Geelong Amateur Radio Club** and the **Eastern and Mountain District Radio Club**. The efforts of **YBONDT**, the **YB Land DX Club** and others to promote the contest in Indonesia are also clearly having a positive impact in attracting new participation from Indonesian amateurs.

Although the increase in the numbers of logs from Australia and Indonesia is encouraging, the participation from other stations from within Oceania has been relatively flat over recent years. In particular, there has been a decline in the number of logs from New Zealand. The contest committee will be working with the New Zealand contest and DX communities to see what can be done to turn around this trend in the 2016 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 these rarer entities in the 2016 contest.

The actual participation in the contest is always much greater than that indicated by the number of logs submitted. There were at least 7,076 stations in the PHONE section and 2,192 stations in the CW section that made one or more QSOs but did not bother submitting a log. More significantly, there were at least 27 stations in the PHONE section and 4 stations in the CW section that made 50 or more QSOs but did not submit a log. The Committee will be seeking to contact these stations to encourage them to enter again in 2016 and submit logs.

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 15M LP, SO 20M LP and SO 40M LP categories. Despite the poorer conditions, there were 38 entries in the QRP categories, the same number as in the 2014 contest when these categories were first introduced.

### Total QSOs

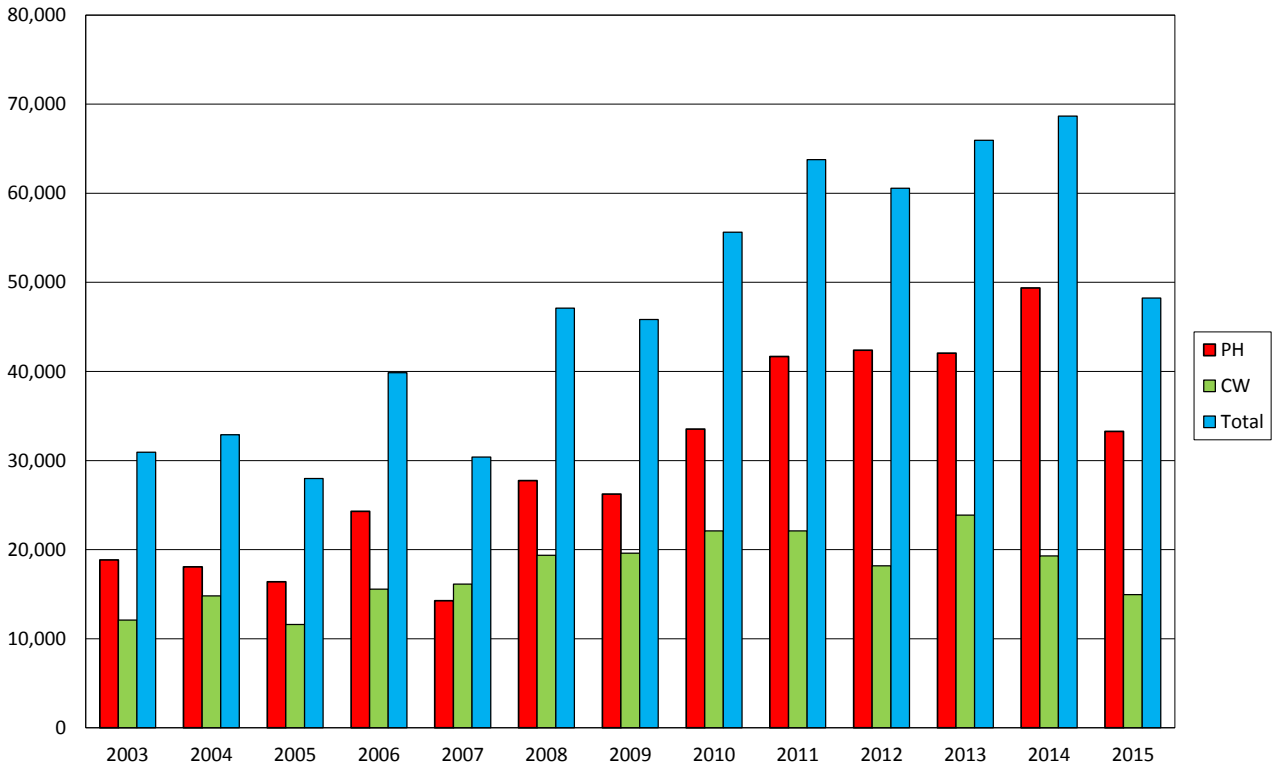


Chart 1: Number of QSOs in Oceania Logs

### PHONE QSOs

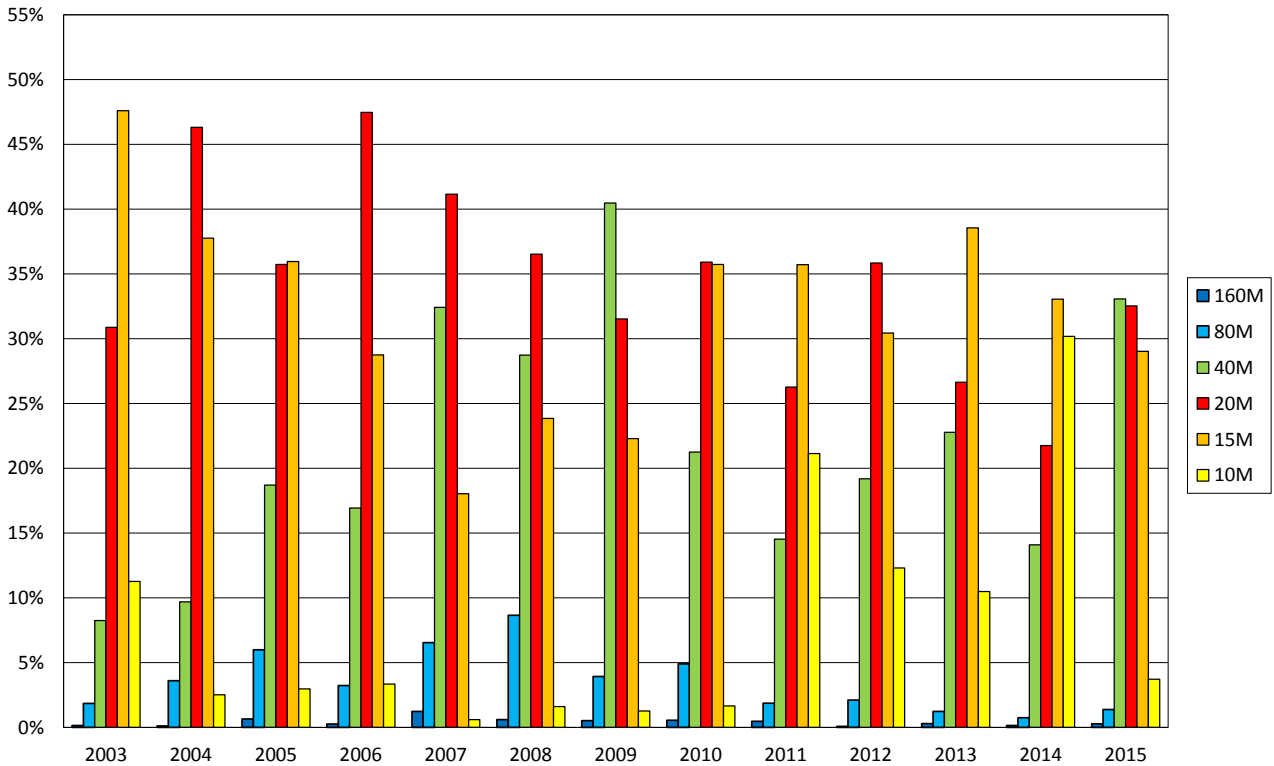


Chart 2: Band Analysis of PHONE QSOs in Oceania Logs

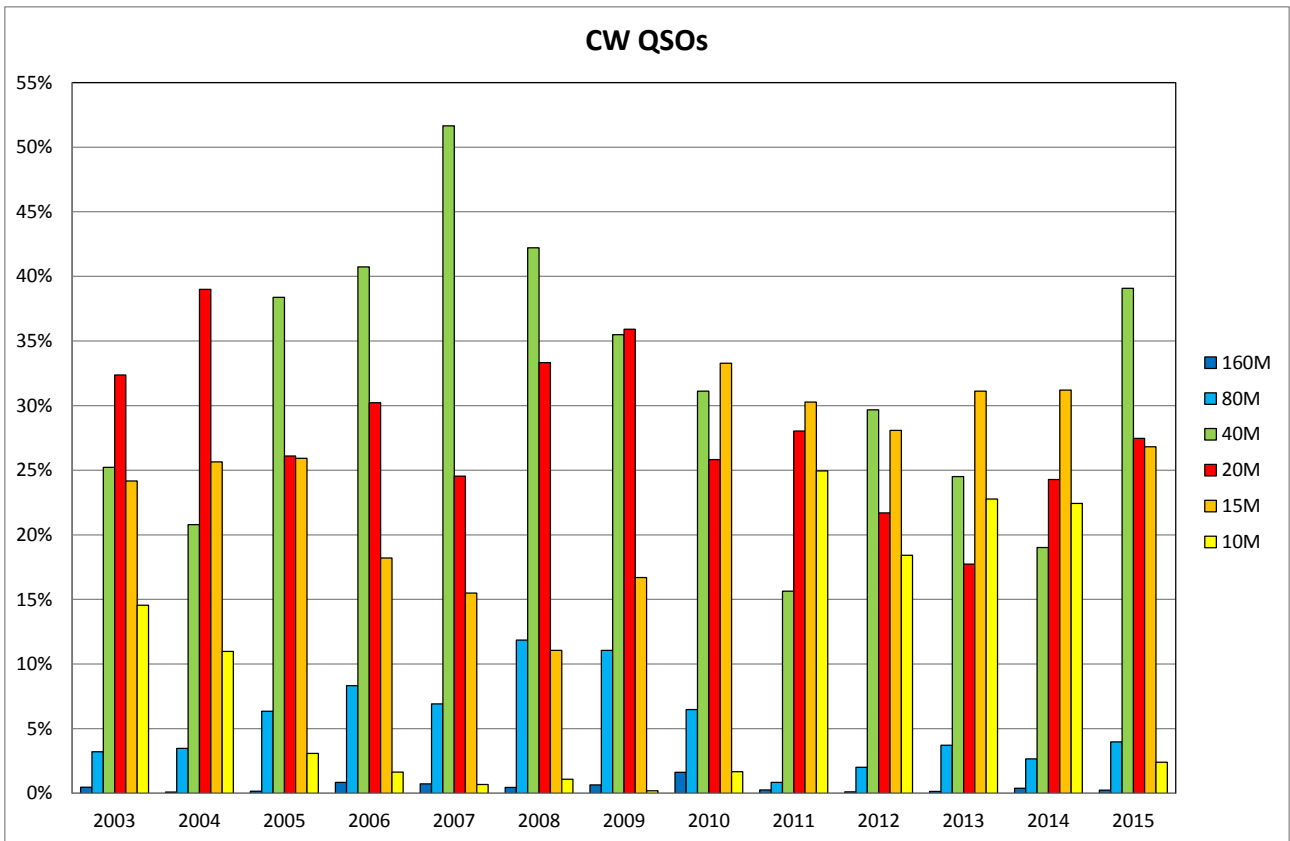


Chart 3: Band Analysis of CW QSOs in Oceania Logs

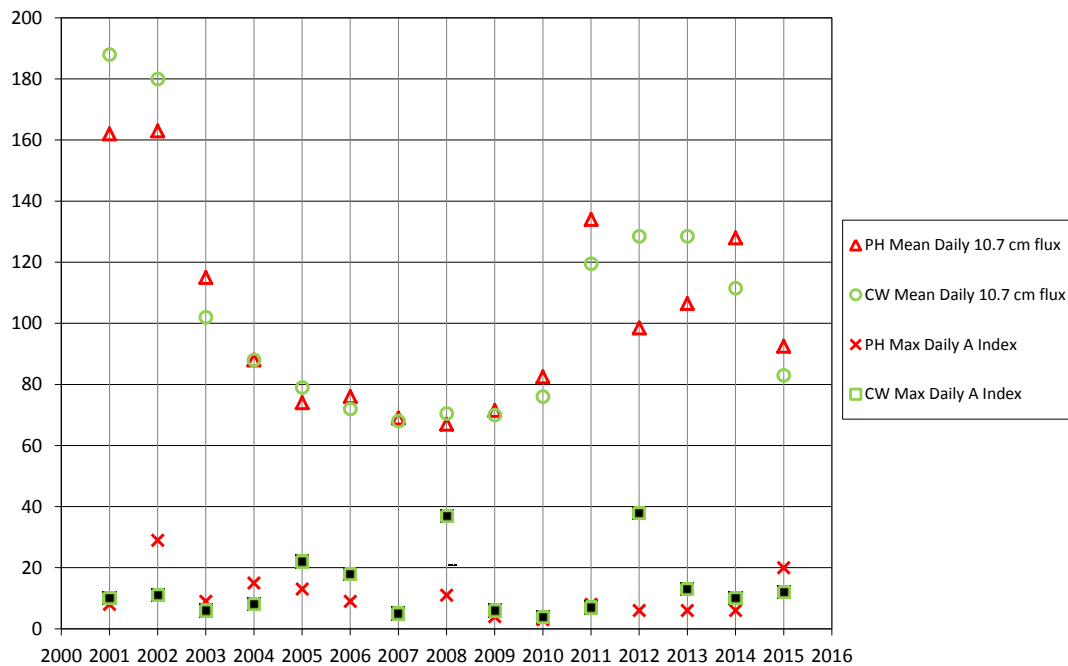
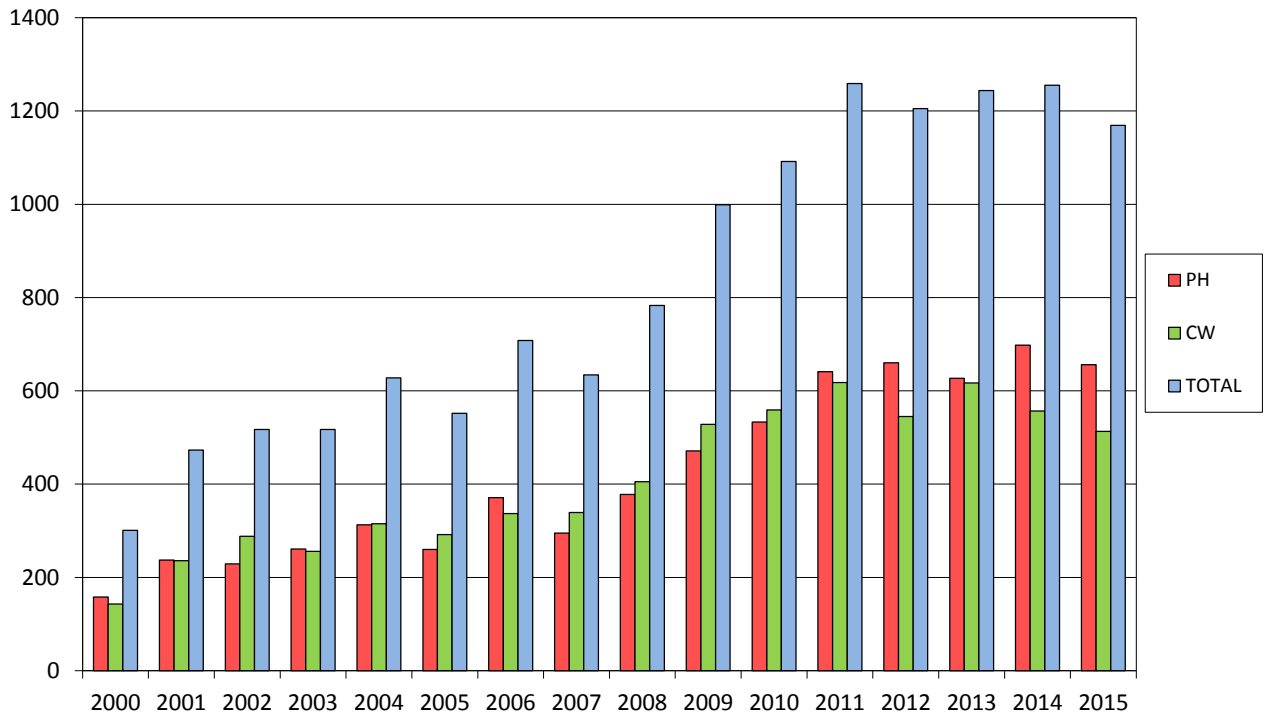
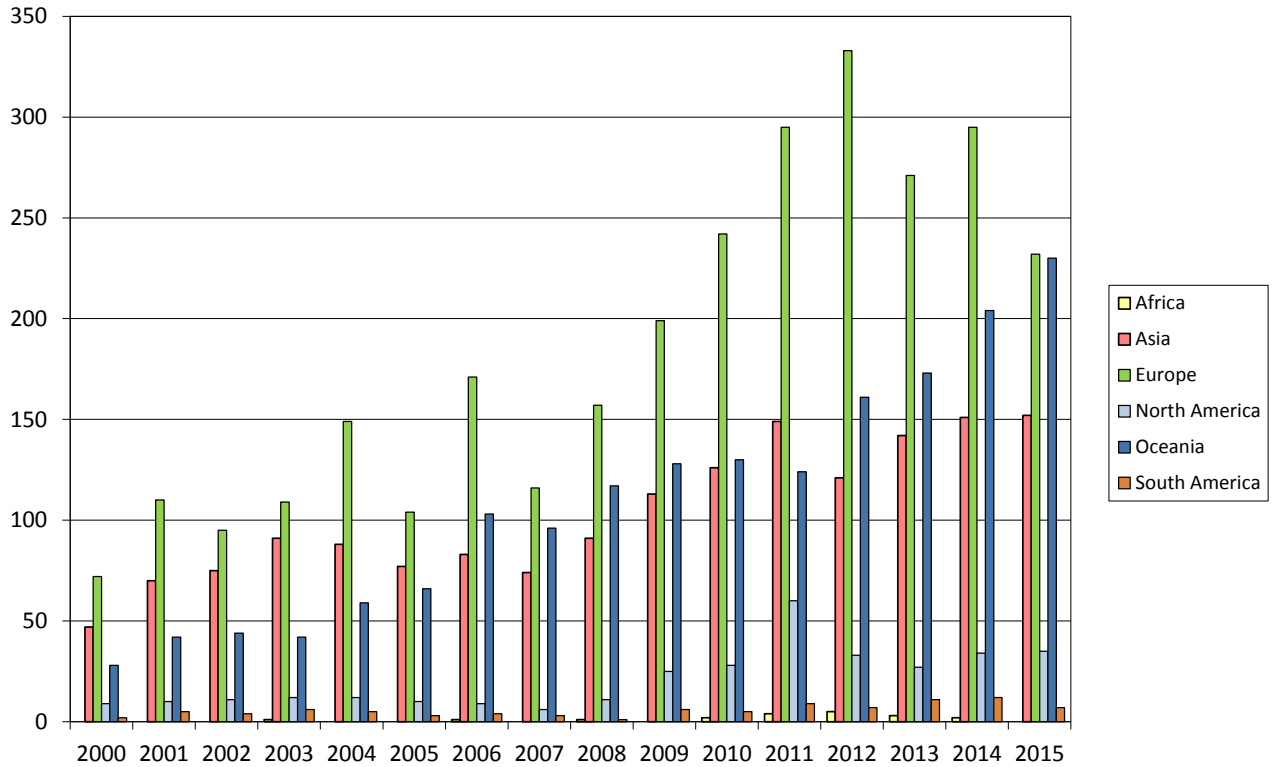


Chart 4: Solar and Geomagnetic Conditions on OCDX Contest Weekends<sup>1</sup>

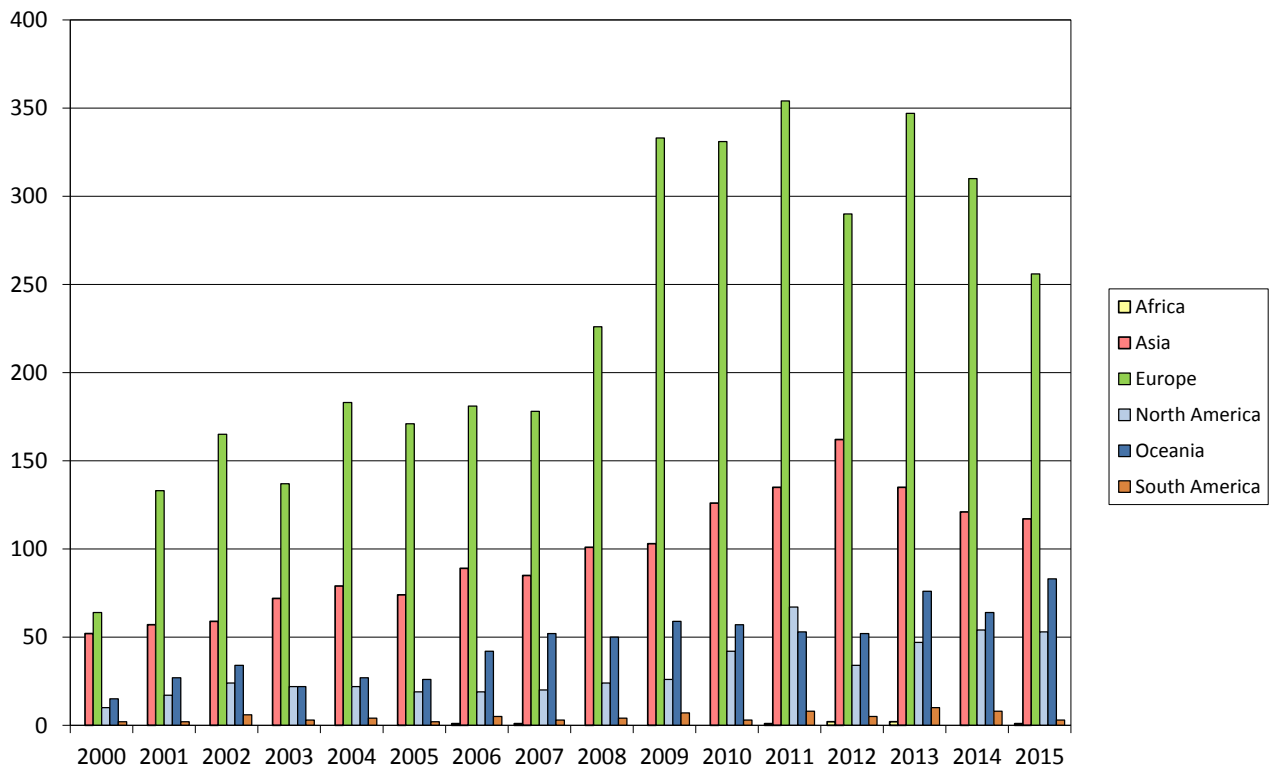
<sup>1</sup> Data Source: NOAA <ftp://ftp.swpc.noaa.gov/pub/warehouse/> . HF propagation conditions are related to the level of 10.7 cm solar flux radiation and the level of geomagnetic storm activity as measured by the daily planetary A index. Higher values of flux generally increase the maximum usable 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.



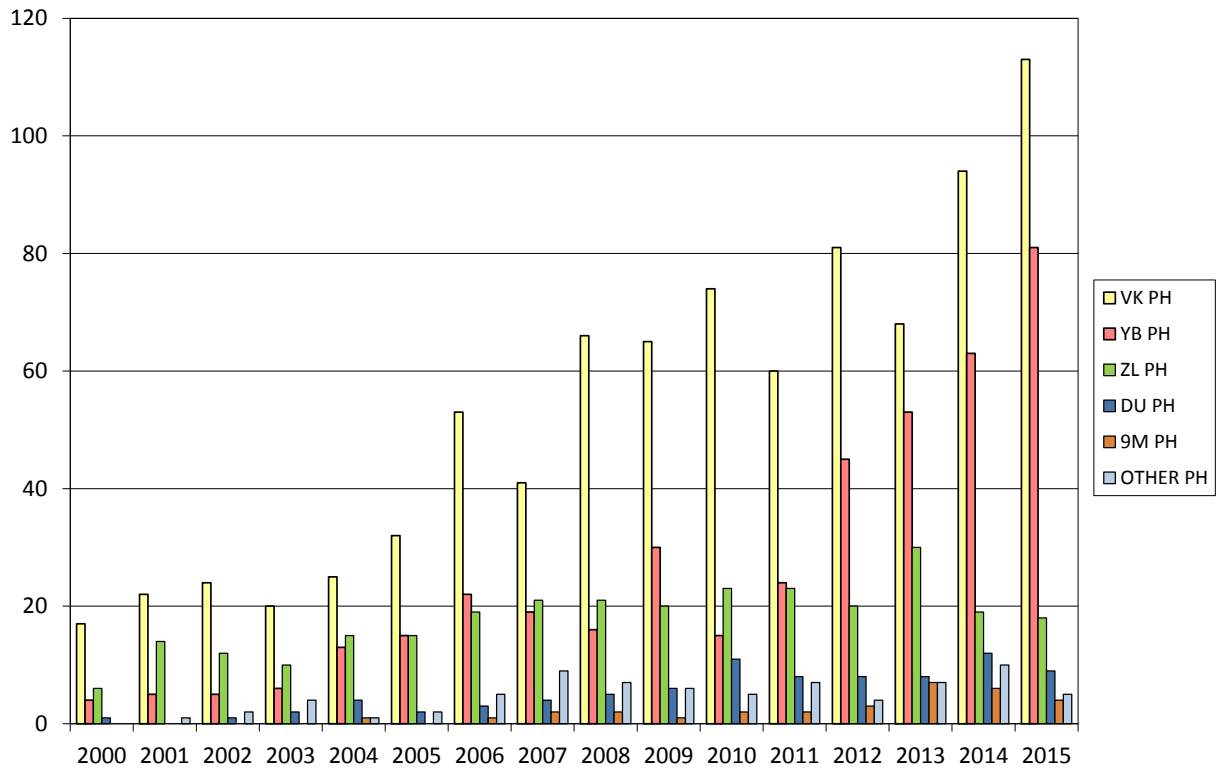
**Chart 5: Number of Logs Received (including check logs)**



**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**

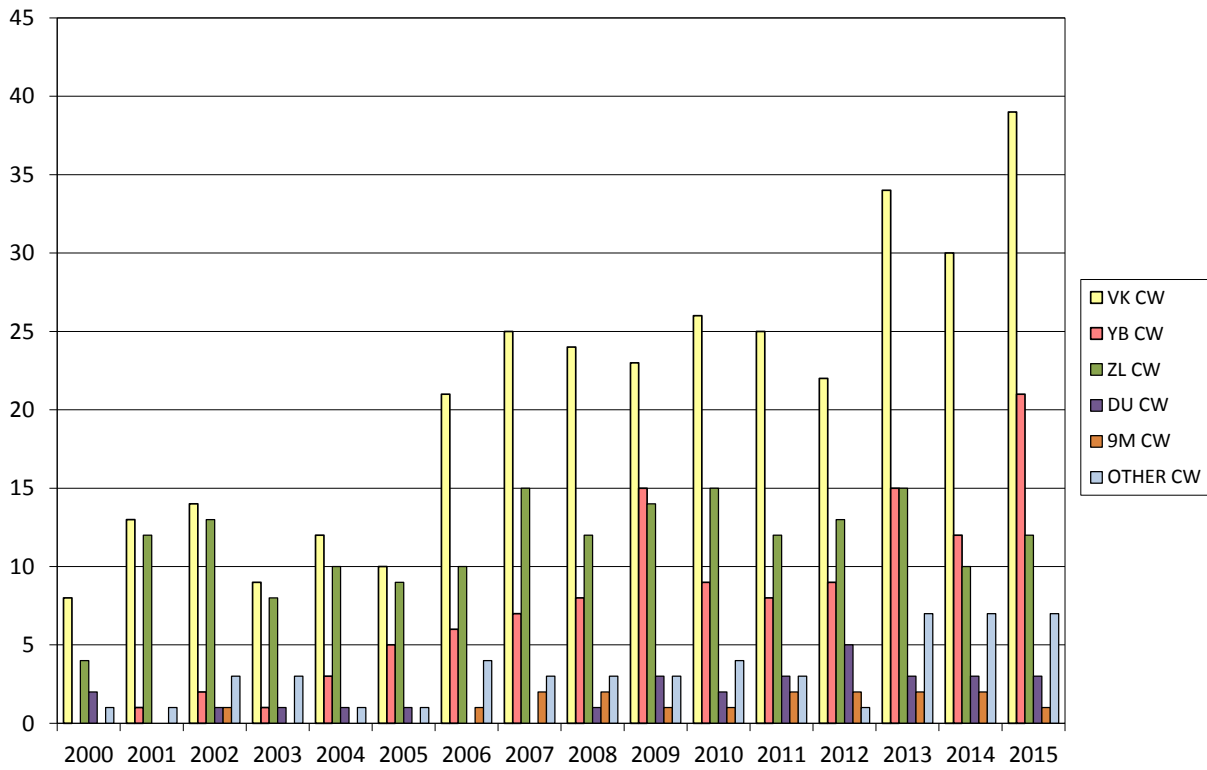


Chart 9: Number of Oceania CW Logs Received - Grouped by Country

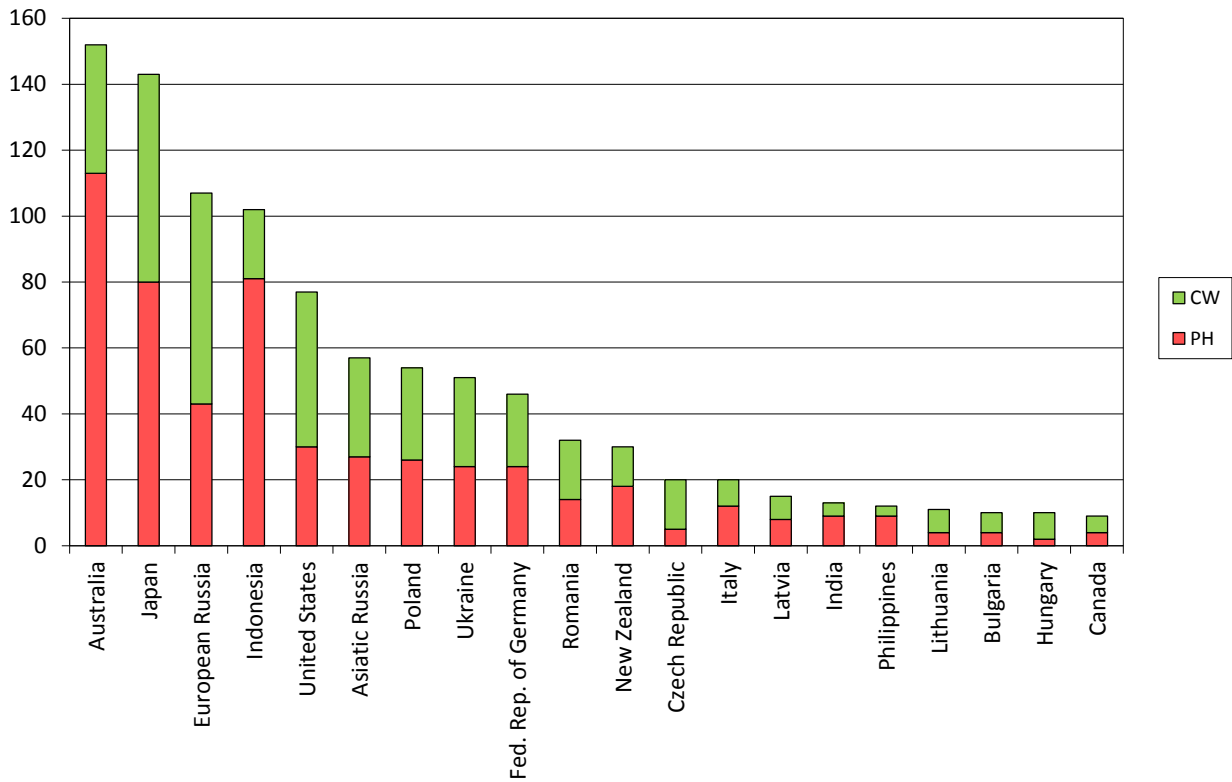
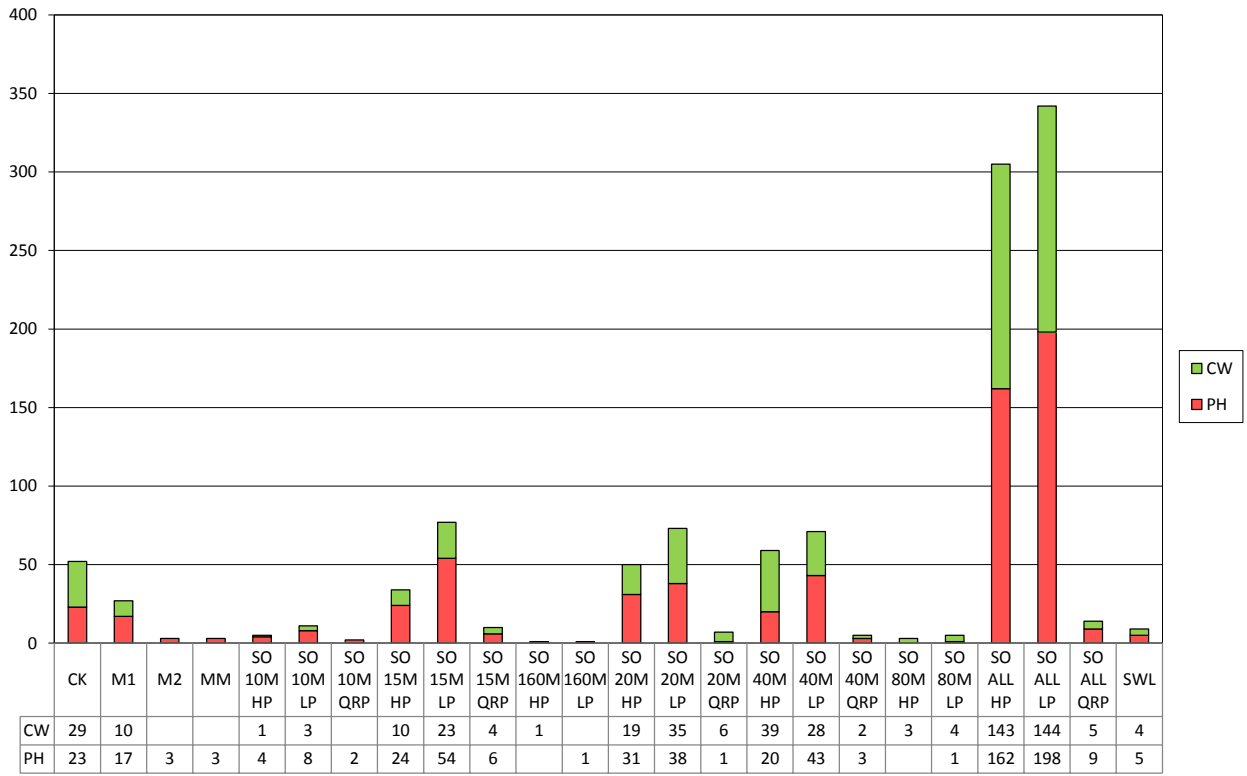


Chart 10: Number of Logs Received – Top 20 Countries



**Chart 11: Number of Logs Received – Grouped by Category**