

**Senate Standing Committee on Environment and Communications**  
**Legislation Committee**  
 Answers to questions on notice  
**Environment portfolio**

**Question No:** 422  
**Hearing:** Supplementary Budget Estimates  
**Outcome:** Agency  
**Programme:** Bureau of Meteorology  
**Topic:** AWAP AND ACORN-SAT DATA  
**Hansard Page:** 17  
**Question Date:** 20 October 2014  
**Question Type:** Spoken

**Senator Canavan asked:**

**Senator CANAVAN:** Can you take this on notice, because you probably won't have this to hand? You mentioned AWAP before. What is the difference in the mean average annual temperature between AWAP and your ACORN-SAT dataset since 1910; what is the mean for summer, spring, autumn and winter; and what percentage difference has been made by the homogenisation process?

**Dr Vertessy:** Can I give you some data now? I can tell you about the trend of average temperatures going from the beginning of the record in 1910 to the present. I will talk about three data sets. AWAP is the gridded dataset, ACORN is the other one that we have spoken about and then there was the predecessor to ACORN, which was also a modernised data set but with a slightly different methodology. If we look at the period 1910 to the present, AWAP says that Australia's climate has increased by 0.73 of a degree. The predecessor to ACORN says 0.96 of a degree and ACORN also says 0.96 of a degree. However, if we look at the period since 1960—

**Answer:**

The table below shows a comparison between the mean temperatures from 1911 to 2013 as the average between the daytime maximum and overnight minimum temperatures in °C. The start year for the AWAP data set is 1911 and, for consistency, the same time period is selected for ACORN-SAT.

	ACORN-SAT Long term mean	AWAP Long term mean	Difference (ACORN-SAT - AWAP)	Percent Difference = ((ACORN-SAT/AWAP)- 1)*100
Annual	21.7	21.7	0.01	0.03%
Summer	27.4	27.6	-0.18	-0.65%
Autumn	21.9	21.8	0.04	0.20%
Winter	15.2	15.0	0.19	1.27%
Spring	22.5	22.5	-0.03	-0.12%