

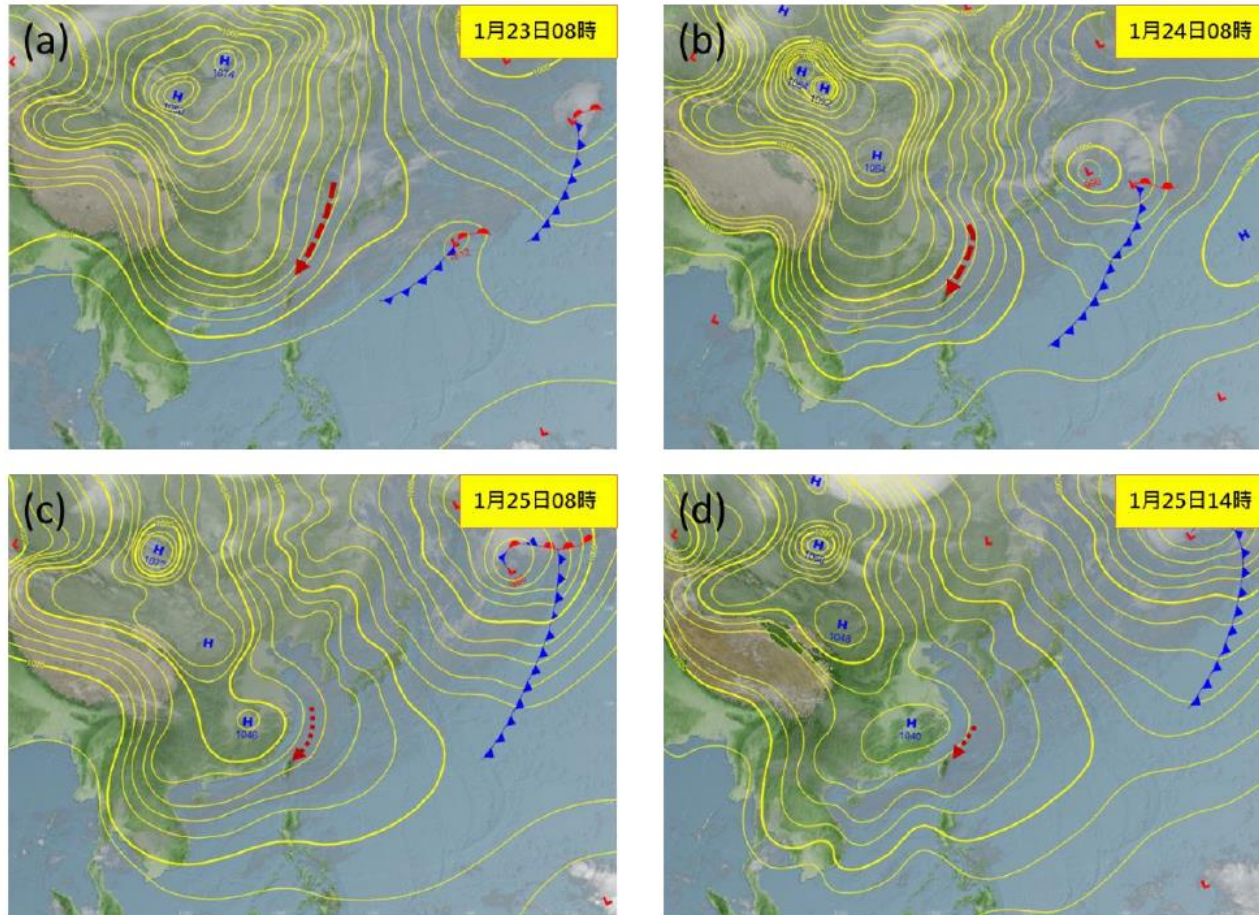
An Unusual Snowfall Case in Taiwan (Jan,2016)

Professor Yuei-An Liou



Surface Weather Charts

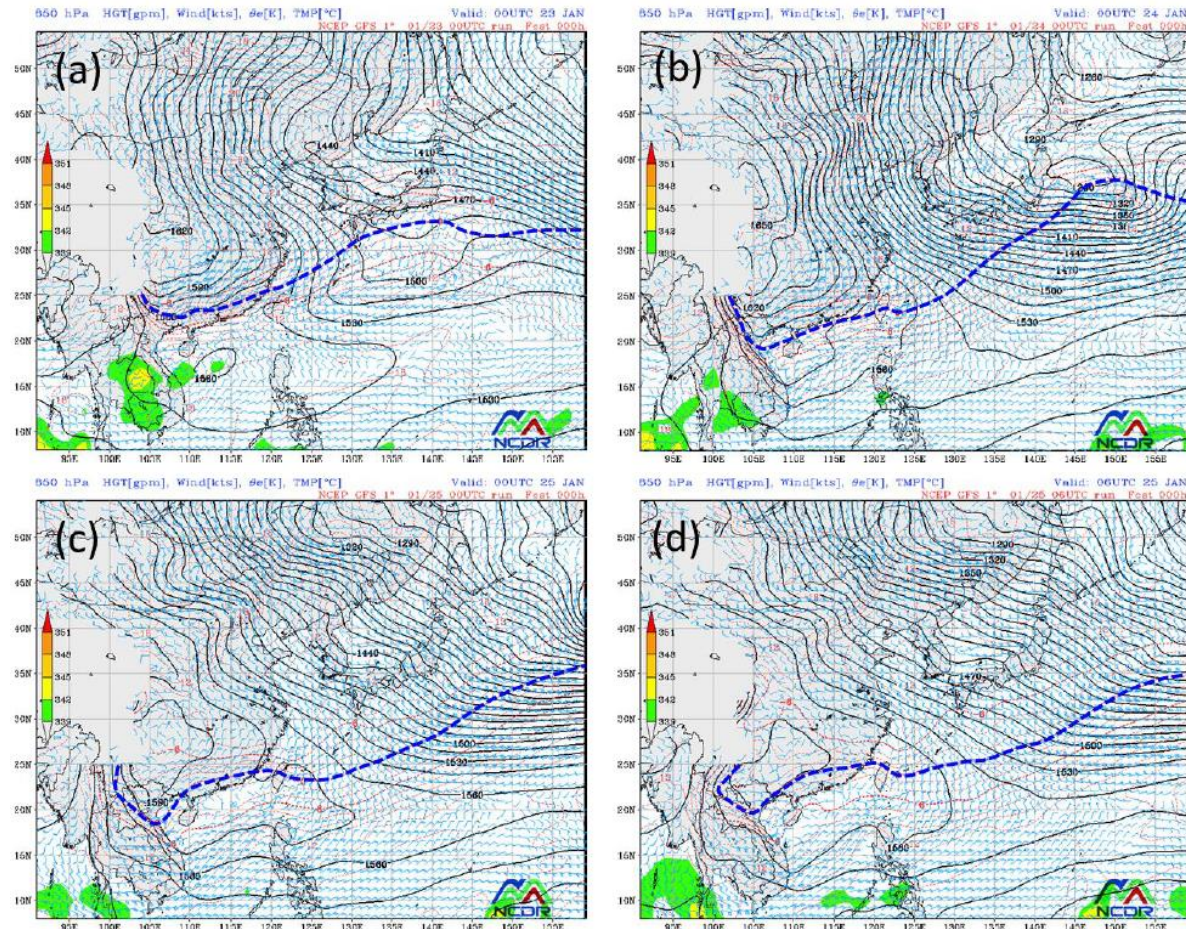
January 2016 Snowfall



(a) Jan 23rd, 08:00 (b) Jan 24th, 08:00 (c) Jan 25th, 08:00 (d) Jan 25th 14:00. Red arrows showed the paths of cold air. (Central Weather Bureau, Taiwan)

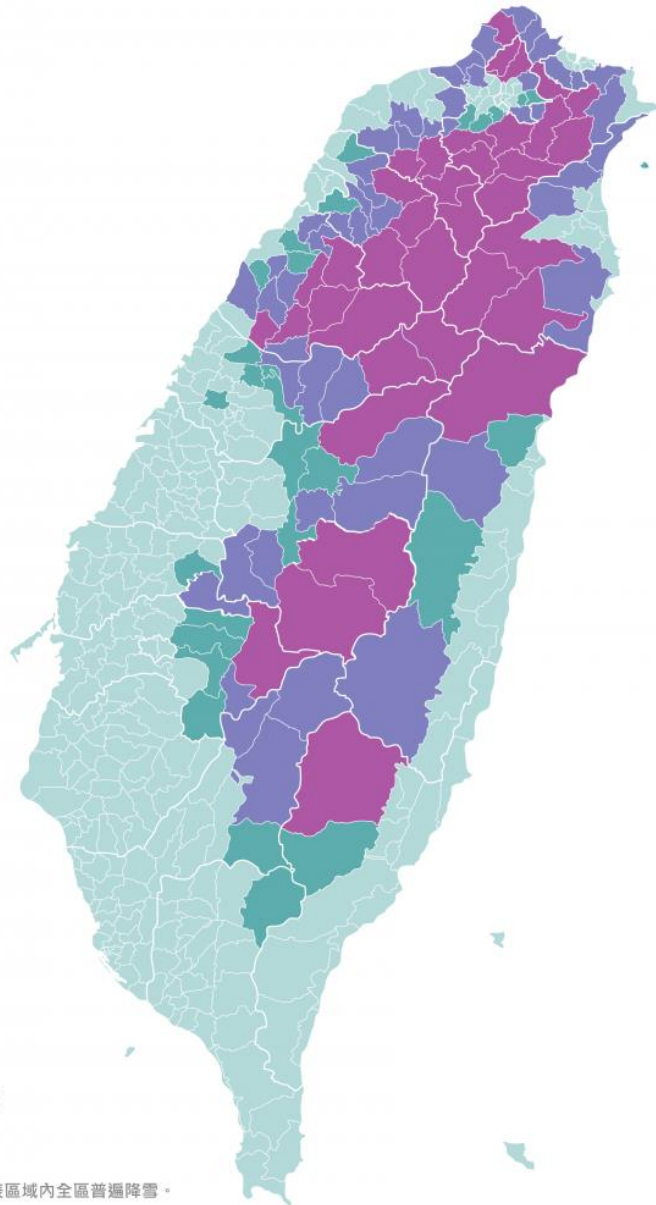
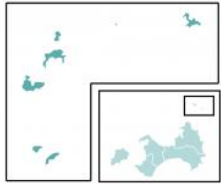
Upper-Air Weather Charts

January 2016 Snowfall



Upper-air charts(850hPa): (a) Jan 23rd,08:00 (b) Jan 24th, 08:00 (c) Jan 25th, 08:00 (d) Jan 25th, 14:00. The blue dotted line is 0° C line while the black line is geopotential topography contour.

Snow Fall



- 低溫特報區域
- 潛在降雪區域
- 已降霰 / 霰區域
- 已降雪區域

※僅標示該區域高海拔降雪情況，不代表區域內全區普遍降雪。

From January 23rd to 26th, 2016 due to cold front from Siberia and Mongolian Plateau, there was an unusual snowfall event in Taiwan, resulting the lowest temperatures all over Taiwan in 44 years.

Figure shows Taiwan map with low temperature alert, potential snowfall, snowfall.

Snowfall in Taipei

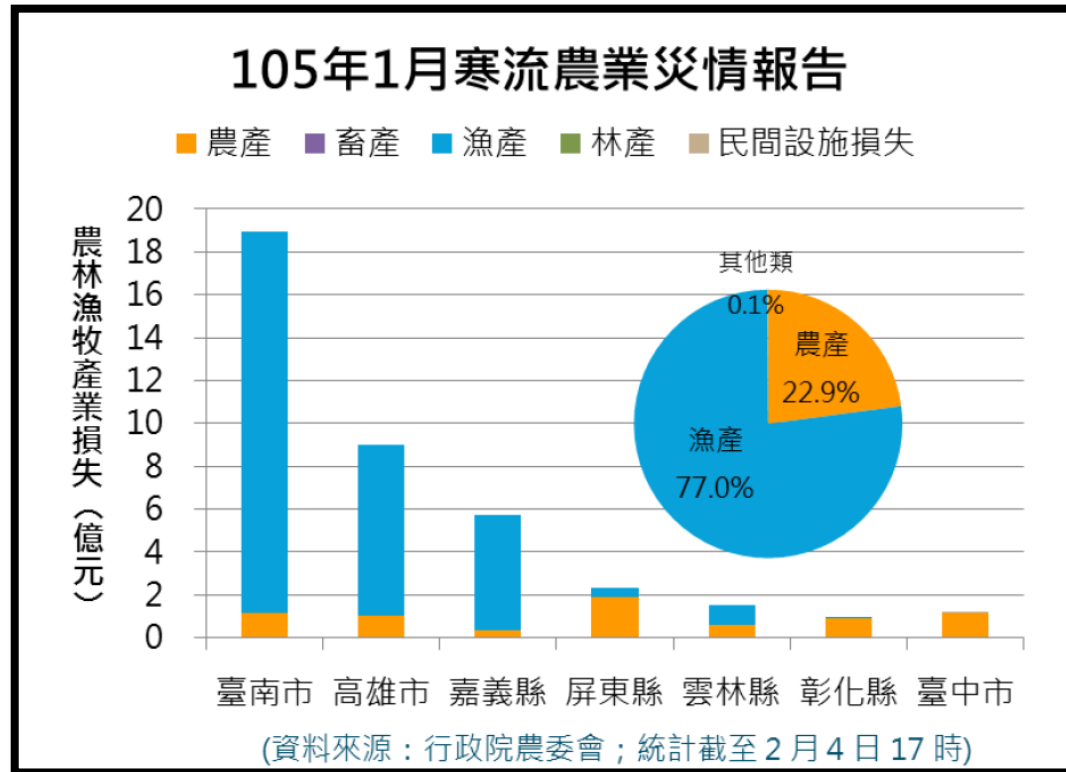


Yangmingshan Mountain's temperature dropped to 3.7° C, breaking the lowest temperature records since the met-stations set up by Central Weather Bureau.

Snowfall



Agricultural Loss Report



According to COA statistics, the total amount of agricultural losses is about 4.2 billion TWD.

Yiqiang Yu, Danrong Chen

NCDR

| 事件 | 日期 | 長度 | 冷度 | 強度 | Shi 1996 | Sun and Li 1997 | Chen 2000 | Jhun and Lee 2004 | Li and Yang 2010 |
|------------|------------|----|------|-----|-------------|--------------------|--------------|----------------------|---------------------|
| 1999(31億) | 1999/12/20 | 7 | 7.3 | 4.6 | +1 | -1 | +3 | -3 | -4 |
| 2002(9千萬) | 2002/1/3 | 4 | 9.3 | 3.5 | 0 | +3 | 0 | -1 | -2 |
| 2004(5億) | 2004/1/20 | 9 | 6.8 | 5.9 | +3 | +2 | +4 | +4 | +3 |
| 2005(28億) | 2004/12/31 | 4 | 7.6 | 4.8 | 0 | +1 | +2 | -4 | -3 |
| | 2005/1/15 | 4 | 8.0 | 5.3 | -2 | +1 | -1 | -5 | -4 |
| | 2005/2/1 | 3 | 9.6 | 3.3 | +1 | 0 | -1 | +2 | -1 |
| | 2005/2/19 | 3 | 7.3 | 7.4 | -1 | -2 | +1 | +4 | +3 |
| | 2005/3/12 | 3 | 9.0 | 8.1 | 0 | +1 | +3 | -1 | 0 |
| 2008(5億) | 2008/2/3 | 2 | 10.0 | 2.7 | +1 | +1 | -1 | +1 | +2 |
| | 2008/2/9 | 7 | 7.8 | 2.7 | +5 | +4 | +2 | +5 | +5 |
| 2009(3億) | 2009/3/14 | 1 | 10.3 | 5.1 | -2 | 0 | +1 | +1 | +2 |
| 2010(9億) | 2010/1/12 | 3 | 7 | 7.1 | +2 | +1 | +2 | +2 | 0 |
| | 2010/2/18 | 4 | 9.7 | 1.5 | -2 | 0 | +3 | +1 | +1 |
| | 2010/3/10 | 2 | 8.5 | 5.8 | -2 | 0 | +1 | +1 | -2 |
| 2011(5億) | 2011/1/11 | 2 | 8.4 | 2.6 | -1 | 0 | 0 | +1 | 0 |
| | 2011/1/15 | 3 | 7.9 | 6.1 | +1 | 0 | +1 | +1 | 0 |
| | 2011/1/30 | 3 | 9.1 | 3.6 | 0 | 0 | +4 | -2 | -2 |
| 2012(1.5億) | 2012/1/4 | 2 | 9.3 | 5.1 | -1 | 0 | -1 | 0 | +5 |
| | 2012/2/8 | 2 | 9.5 | 7.3 | +1 | 0 | -3 | +1 | +4 |
| 2014(1.3億) | 2014/2/10 | 6 | 7.8 | 5.3 | -1 | -1 | +3 | 0 | +5 |
| 2016 (42億) | 2016/1/23 | 4 | 4.0 | 9.8 | +1 | +1 | +2 | -1 | -1 |

Cold Front Events in Taiwan from 1999 to 2016)