

第二節

二零零六年熱帶氣旋概述

Section 2

TROPICAL CYCLONE OVERVIEW FOR 2006

2.1 二零零六年的熱帶氣旋回顧

2.1.1 北太平洋西部（包括南海區域）的熱帶氣旋

二零零六年共有27個熱帶氣旋影響北太平洋西部及南海區域（即由赤道至北緯45度、東經100至180度所包括的範圍）。其中有一個熱帶氣旋於北太平洋中部形成後，橫過國際換日線進入北太平洋西部。除了2004年，過去九年（1998-2006年）在該海域的熱帶氣旋數目都少於1961-1990年的30年平均數31個。此外，全年有14個熱帶氣旋達到颱風強度，比正常數目少兩個。

本年首個熱帶氣旋在三月形成。圖2.1是二零零六年在北太平洋西部及南海區域的熱帶氣旋出現次數之每月分佈。

二零零六年內有七個熱帶氣旋吹襲中國，三個影響台灣，四個影響日本（包括琉球群島），一個登陸南韓，另有七個橫過菲律賓及三個登陸越南。

二零零六年風力最強的熱帶氣旋是桑美（0608），最高風速估計約為每小時215公里，而最低中心氣壓則約為920百帕斯卡。

西馬侖（0619）是二零零六年路徑最特別的熱帶氣旋。西馬侖在十月廿七日形成後，一直受到高層副熱帶高壓脊南部的偏西引導氣流影響，大致向西北偏西移動。隨著南海高層副熱帶高壓脊減弱，西馬侖由十一月一日至二日幾乎停留不動。其後西馬侖受到強烈東北季候風的影響，轉向西南偏南移動及在南海上消散。

2.1.2 香港責任範圍內的熱帶氣旋

在二零零六年的27個熱帶氣旋中，有16個影響香港責任範圍（即北緯10至30度、東經105至125度所包括的地區），與1961-1990年的30年平均16.4個相約（表2.1）。這16個熱帶氣旋中，有五個在香港責任範圍內形成。在二零零六年，香港天文台總共發出460個供船舶使用的熱帶氣旋警告（表4.2）。

2.1.3 南海區域內的熱帶氣旋

二零零六年共有13個熱帶氣旋影響南海區域（即北緯10至25度、東經105至120度所包括的地區），當中有四個在南海形成，其餘九個從北太平洋西部進入南海。

2.1.4 影響香港的熱帶氣旋

二零零六年有七個熱帶氣旋影響香港（圖2.2），接近正常（表2.2）。這七個熱帶氣旋是珍珠（0601）、杰拉華（0602）、派比安（0606）、寶霞（0609）、八月及九月的熱帶低氣壓及西馬侖（0619）。

在本年五月的珍珠、八月的派比安及九月的熱帶低氣壓影響香港期間，天文台都發出了三號強風信號，這亦是今年發出的最高信號。而六月的杰拉華，八月的寶霞及熱帶低氣壓及十月的西馬侖亦導致天文台發出一號戒備信號。

2.1.5 熱帶氣旋的雨量

二零零六年各熱帶氣旋為香港帶來的雨量（即該熱帶氣旋在出現於香港600公里範圍內至其消散或離開香港600公里範圍之後72小時期間，天文台錄得的雨量）共為1 007.3毫米，約佔該年總雨量2 627.8毫米的百分之38，比正常的737.9毫米多約百分之37。

九月十二日至十三日影響香港的熱帶低氣壓為香港帶來265.6毫米的雨量，是2006年為香港帶來最多雨量的熱帶氣旋。

2.2 每月概述

這一節逐月介紹二零零六年北太平洋西部及南海區域的熱帶氣旋概況。影響香港的各熱帶氣旋則詳述於第三節。

一月及二月

二零零六年一月及二月並無熱帶氣旋影響北太平洋西部及南海區域。

三月

一熱帶低氣壓於三月四日在雅蒲島以南約510公里處形成。隨後兩天，它在北太平洋西部上緩慢地移動，於三月六日轉向西南偏西推進，並在翌日減弱為一個低壓區。

四月

二零零六年四月並無熱帶氣旋影響北太平洋西部及南海區域。

五月

珍珠(0601)在五月九日於雅蒲島西南偏西約 420 公里的北太平洋西部上發展成爲一個熱帶低氣壓。它大致向西北偏西推進，橫越菲律賓中部。珍珠在五月十三日進入南海並增強爲颱風。珍珠進入南海後初時向西推進，於五月十五日轉北趨向華南沿岸。珍珠在五月十五日至十六日初時的中心最高持續風速達每小時 185 公里，是有記錄以來在五月進入南海最強的熱帶氣旋。珍珠在五月十七日開始採取東北偏北路徑移動及於翌日早上在汕頭附近登陸並逐漸減弱。珍珠在橫掃中國東南沿岸地區後，於五月十八日傍晚進入東海，並變成溫帶氣旋。

六月

杰拉華(0602)在六月二十七日清晨於西沙島之東南偏東約 410 公里處發展成爲一個熱帶低氣壓，然後大致向西北方向移動，橫過南海中部，並於當晚增強爲熱帶風暴。杰拉華在翌日掠過海南島東北沿岸區域及於晚上減弱爲熱帶低氣壓。杰拉華在二十九日早上於湛江附近登陸，並於當天在廣東西部進一步減弱爲一個低壓區。

艾雲尼(0603)在六月三十日早上於雅蒲島之東南偏南約 380 公里的北太平洋西部上發展成爲一個熱帶低氣壓。它大致向西北偏北方向移動，並於七月三日增強成爲颱風。艾雲尼於七月八日橫過琉球群島，並轉向北移動，越過東海。在浙江沿海地區，超過 7 600 名寧波居民需要疏散，八千多艘漁船要回到寧波及舟山暫避。艾雲尼於七月十日早上減弱爲一個強烈熱帶風暴，然後在南韓西南海岸登陸，並進一步減弱爲熱帶風暴。它於當天稍後變成一個溫帶氣旋。艾雲尼影響南韓期間，造成八人死亡或失蹤，12 人受傷。逾 2 200 公頃農田被淹，數百間學校停課，55 班航班取消及三萬艘船隻回岸暫避。

七月

碧利斯(0604)在七月八日晚上於雅蒲島之東北約 410 公里的北太平洋西部上發展成爲一個熱帶低氣壓，並大致向西北方向移動。碧利斯於十一日晚上增強爲強烈熱帶風暴，並於翌日掠過呂宋海峽東部。它的外圍環流爲菲律賓北部帶來暴雨及山泥傾瀉，造成 14 人死亡，七人失蹤，兩萬人流離失所。碧利斯於十三日晚上掠過台灣北部，大風及豪雨引致三人死亡，兩人失蹤，農業損失逾一億元新台幣。碧利斯於七月十四日穿越台灣海峽並在福建登陸。它進入內陸後逐漸減弱及於翌日在江西消散。碧利斯在福建、浙江、湖南、江西、廣東及廣西造成嚴重災害，共導致 621 人死亡，208 人失蹤及 19 萬人被洪水圍困。約 21 萬間房屋倒塌，農作物受災面積在 96 萬公頃以上，直接經濟損失超過 240 億元人民幣。

格美(0605)在七月十八日晚上於關島以南約 380 公里的北太平洋西部上發展成爲一個熱帶低氣壓。它向西北偏西方向移動並逐漸增強，在七月二十一日達颱風強度。格美於七月二十五日清晨橫過台灣南部，引致六人受傷，475 人需要疏散。島上 81 000 多戶停電及超過 40 班航班取消，農作物損失達 7 738 萬新台幣。格美在同日穿越台灣海峽及減弱爲一個強烈熱帶風暴。格美在當天下午於福建登陸並繼續減弱，及後格美於七月二十六日在內陸消散。格美在安徽、福建、江西、湖南及廣東造成嚴重破壞，共導致 28 人死亡，36 人失蹤及 10 萬人被洪水圍困。約 12 萬間房屋倒塌及逾 48 萬公頃農作物受到破壞，直接經濟損失超過 11 億元人民幣。

派比安(0606)在七月三十一日下午於馬尼拉之東北約 260 公里處發展成爲一個熱帶低氣壓，並向西移動，橫過呂宋。派比安進入南海後，於八月一日轉向西北偏西方向移動及於翌日增強爲一個颱風，並趨向廣東西部海岸。派比安在八月三日晚上於湛江以東登陸，隨後開始減弱，於翌日晚上在廣西消散。

八月

瑪莉亞(0607)在八月五日早上於硫黃島以東約 610 公里的北太平洋西部上發展成爲一個熱帶低氣壓。它向西北偏西方向移動並在八月六日增強成爲一個強烈熱帶風暴。瑪莉亞在兩天後轉向東北推進，掠過日本本州南面海域，於八月九日減弱爲熱帶風暴及在八月十日晚上變成一個溫帶氣旋。瑪莉亞掠過本州南面海域期間，一架飛往東京的航機在高空遇到湍流，機上五名乘客受傷。

桑美(0608)在八月五日下午於關島之東南約 380 公里的北太平洋西部上發展成爲一個熱帶低氣壓，然後大致向西北方向移動並逐漸增強，於八月七日下午達颱風強度。桑美其後穩定地向西北偏西推進，直趨中國東部海岸。桑美在八月九日晚上至八月十日早上時的中心附近最高持續風速估計爲每小時 215 公里，是 2006 年最強的熱帶氣旋。桑美於八月十日晚上在浙江登陸。它進入內陸後開始減弱及於翌日在江西消散。桑美在浙江、福建及江西造成嚴重災害，共導致最少 460 人死亡，1 350 人受傷，50 人失蹤，約有 200 萬

人疏散，六萬間房屋倒塌，直接經濟損失超過 238 億元人民幣。另外，福建有 1 000 艘漁船受到破壞，浙江沿海地區通信系統中斷，兩省共有 60 多條公路封閉。

寶霞(0609)在八月六日下午於沖繩島那霸之東南約 590 公里的北太平洋西部上發展成爲一個熱帶低氣壓，並向西北偏西移動。寶霞於八月七日日間曾一度增強至強烈熱帶風暴。但它當晚減弱爲一個熱帶風暴，並向西推進，趨向台灣南部。寶霞掠過台灣南部後逐漸靠近廣東東部沿海地區，並於八月九日晚上進一步減弱爲一個熱帶低氣壓。受到桑美的影響，寶霞在八月十日移動緩慢及不規則。寶霞於當天晚上減弱爲一個低壓區。

悟空(0610)在八月十二日晚上於硫黃島以南約 330 公里的北太平洋西部上發展成爲一個熱帶低氣壓後蜿蜒向西北方向推進，於八月十五日增強爲一個強烈熱帶風暴。悟空在兩天後減弱爲一個熱帶風暴並隨後在九州東南海岸登陸。悟空橫掃九州後，在八月十九日晚上變成一個溫帶氣旋。悟空肆虐日本期間，導致三人死亡及三人受傷，另一人失蹤。約有 110 人疏散，三間房屋損壞，約 200 用戶的電力中斷。另外，有 65 班航班取消。

清松(0611)在八月十四日清晨於沖繩島那霸以南約 980 公里的北太平洋西部上發展成爲一個熱帶低氣壓後向東北偏東移動，並於當天增強至熱帶風暴。清松在翌日晚上開始減弱，隨後於八月十六日在小笠原群島以西海面消散。

一個熱帶低氣壓在八月二十三日晚上於海口之東南約 210 公里的南海北部上形成。它初時向北移動，隨後採取東北的路徑。該熱帶低氣壓在二十四日晚上轉向西北方向推進，並於翌日清晨在廣東西部的陽江附近登陸及減弱爲一個低壓區。

颱風**伊歐凱(0612)**在北太平洋中部形成，並於八月二十七日越過國際換日線進入北太平洋西部。伊歐凱初時向西南偏西移動，三天後轉向西北偏西推進。伊歐凱於九月五日在日本以東的北太平洋西部轉向東北移動。它在九月六日早上減弱爲強烈熱帶風暴及在當天晚上變成一個溫帶氣旋。

九月

珊珊(0613)在九月九日下午於於雅浦島以北約 460 公里的北太平洋西部上發展成爲一個熱帶低氣壓，並向西北方向移動。它在十二日增強成爲一個颱風後採取偏西的路徑，三天後轉向北推進及掠過台灣以東海域。珊珊其後向東北偏北推進並於十七日越過日本九州西北部。珊珊在十八日減弱爲強烈熱帶風暴及在翌日變成一個溫帶氣旋。珊珊肆虐日本期間，導致九人死亡及超過 320 人受傷，一人失蹤，約有 12 000 人疏散，40 間房屋被摧毀，190 間房屋受到破壞及約 38 萬用戶的電力中斷。另外，有數百班航班受到影響，一列火車脫軌翻側。南韓東南部亦受到珊珊影響，有一人受傷，約 3 000 用戶的電力中斷，南韓與日本之間的渡輪服務需要停航。

一個熱帶低氣壓在九月十二日下午於西沙之東北偏東約 350 公里的南海北部上形成。它初時向北移動，但隨後轉向西北偏西方向推進，於翌日晚上於廣東西部沿海附近減弱爲一個低壓區。

摩羯(0614)在九月十七日清晨於關島之東北偏東約 1 450 公里的北太平洋西部上發展成爲一個熱帶低氣壓，然後緩慢向東推進。摩羯在兩天後轉向西移動，並增強成爲一個颱風。摩羯在二十一日採取西北的路徑及於兩天後橫過小笠原群島並轉向東北推進。摩羯在二十四日減弱爲強烈熱帶風暴及於翌日變成一個溫帶氣旋。

一個熱帶低氣壓在九月二十二日晚上於西沙之東南偏南約 420 公里的南海中部形成，並大致向西北方向移動。該熱帶低氣壓在二十四日轉向西推進，於翌日在越南北部海岸登陸，並減弱為一個低壓區。

象神(0615)在九月二十五日晚上於馬尼拉之東南偏東約 900 公里的北太平洋西部上發展成爲一個熱帶低氣壓，然後向西北偏西移動。象神在兩天後增強成爲一個颱風，並橫掃菲律賓。象神肆虐菲律賓期間，導致超過 207 人死亡，22 人失蹤，近二百萬人無家可歸，另 4 300 萬人受停電影響，經濟損失達二億四千萬美元。象神進入南海後，在九月二十九日採取偏西的路徑，橫過南海中部。象神於十月一日在越南中部峴港附近登陸。它進入內陸後減弱，翌日在泰國境內消散。象神在越南造成嚴重災害，共導致 42 人死亡，七人失蹤，數千人受傷，20 萬人需要疏散，一萬五千間房屋倒塌，另五萬間房屋被水淹，越南中部多個城市的電力供應及通訊中斷。另外，48 班航班需要取消，560 艘船隻沉沒或毀壞，經濟損失約六億三千萬美元。中國海南亦受到象神影響，有一人死亡及 12 人受傷，200 人無家可歸。70 間房屋受到破壞，七千棵樹木被吹斷，經濟損失約 80 萬美元。另外，瓊州海峽的渡輪服務需要暫停。

十月

貝碧嘉(0616)在十月二日清晨於沖繩島那霸之東南偏南約 1 270 公里的北太平洋西部上發展成爲一個熱帶低氣壓並移動緩慢。貝碧嘉於翌日增強成爲一個熱帶風暴，並加速向北推進。它在十月四日轉向東北移動，於兩天後變成一個溫帶氣旋。

一個名爲**溫比亞(0617)**的熱帶低氣壓在十月三日下午於硫黃島之東南偏東約 1 390 公里的北太平洋西部上形成後向西北偏北移動，並於當晚增強成爲一個熱帶風暴。溫比亞在十月五日轉向北移動，於翌日在海上消散。

蘇力(0618)在十月九日早上於關島以東約 1 410 公里的北太平洋西部上發展成爲一個熱帶低氣壓，並大致向西北偏西移動。蘇力在十二日增強成爲一個颱風，於翌日轉向東北偏北推進，掠過小笠原群島。蘇力在十月十五日減弱爲一個強烈熱帶風暴，並轉向東北移動，於翌日變成一個溫帶氣旋。

西馬侖(0619)在十月二十七日清晨於馬尼拉以東約 1 390 公里處的北太平洋西部上發展成爲一個熱帶低氣壓並向西移動。它在當天增強成爲一個熱帶風暴後採取西北偏西的路徑，趨向呂宋。西馬侖在二十八日增強成爲一個颱風，並於翌日晚上橫過呂宋。西馬侖在十月卅日進入南海，然後在翌日轉向西北推進。它於十一月一日開始移動緩慢，然後更幾乎停留不動。西馬侖於十一月二日晚上減弱爲強烈熱帶風暴，並轉向西南偏南移動及繼續減弱。它於十一月六日在西沙島東南偏南的南海中部消散。

十一月

飛燕(0620)在十一月九日於馬尼拉以東約 1 240 公里之北太平洋西部上發展成爲一個熱帶低氣壓，並向西移動。它於當日黃昏增強爲一股熱帶風暴，並在翌日早上再增強爲一股強烈熱帶風暴。飛燕在十一月十日下午進一步增強成爲一股颱風，並在翌日橫過呂宋。菲律賓有一人死亡，八人受傷，另外有三人失蹤。多條村落受水浸影響，超過 8 000 人要疏散。飛燕在進入南海後轉向西南偏西移動，並在十一月十二日黃昏減弱爲強烈熱帶風暴。飛燕隨後在十一月十三日轉向西北移動，並於當日下午減弱爲熱帶風暴。它在十一月十四日繼續減弱爲熱帶低氣壓，然後在下午於海南島東南的海面消散。

榴槿(0621)在十一月廿六日在雅浦島以東 830 公里的北太平洋西部上發展為熱帶低氣壓，並大致向西北偏西移動。它於當日下午增強為熱帶風暴。榴槿在十一月廿八日增強為強烈熱帶風暴，然後在翌日進一步增強成為颱風及向西移動。它在十一月三十日橫過菲律賓中部，與榴槿相連的暴雨引起廣泛地區山泥傾瀉，超過 570 人喪生，746 人失蹤。此外，接近 12 萬房屋被毀及超過 100 萬人受影響。該區電力供應、通訊網絡及食水供應均被切斷。估計農作物損失高達一千萬美元。榴槿於十二月一日進入南海中部，並向西移動。它在十二月三日轉向西南偏西移動及於翌日轉向西南移動。榴槿在十二月四日下午減弱為強烈熱帶風暴，於翌日早上進一步減弱為熱帶風暴，並掠過越南南部沿岸。榴槿為越南南部帶來大風雨，造成 67 人死亡、約 31 人失蹤及超過 450 人受傷。此外、超過 120 000 間房屋被毀，超過 1 000 艘魚船沉沒，電力及通訊線路被嚴重破壞及不少樹木被吹倒。榴槿在十二月五日下午減弱為熱帶低氣壓，並於當日稍後在越南南部沿岸地區消散。

十二月

尤特(0622)於十二月七日在馬尼拉東南偏東 1 800 公里的北太平洋西部上發展為熱帶低氣壓，並向西北偏西移動。它於十二月八日清晨增強為熱帶風暴，黃昏時再增強為強烈熱帶風暴，於翌日中午進一步增強為颱風後於同日下午開始橫過菲律賓中部。菲律賓至少有七人死亡、15 人失蹤、超過九萬人需要疏散。尤特引致公共設施及電線被吹倒、渡假設備及房屋受破壞，並帶來嚴重水浸及幾宗山泥傾瀉。尤特於十二月十日下午進入南海，並繼續向西北偏西移動。它於十二月十二日轉向西北移動，於翌日移動減慢及轉向北。受到東北季候風的影響，尤特在十二月十四日迅速減弱及轉向東北偏東移動。它於早上先減弱為熱帶風暴，下午進一步減弱為熱帶低氣壓，並在晚上在西沙東北的南海上消散。

熱帶低氣壓**潭美(0623)**於十二月十七日在雅浦島東北 310 公里的北太平洋西部上形成，並向西北移動。它於翌日清晨增強為熱帶風暴，然後轉向西北偏西移動。潭美於十二月十九日早上減弱為熱帶低氣壓，並於下午在呂宋以東的北太平洋西部上消散。

2.1 Review of tropical cyclones in 2006

2.1.1 Tropical cyclones over the western North Pacific (including the South China Sea)

In 2006, 27 tropical cyclones affected the western North Pacific and the South China Sea (i.e. the area bounded by the Equator, 45°N, 100°E and 180°), with one of them formed over the central part of the North Pacific and crossed the International Date Line into the western North Pacific. In the past 9 years (1998-2006), with the exception of 2004, the annual number of tropical cyclones in this ocean basin has been less than the 30-year (1961-1990) average of 31. Throughout the year, 14 tropical cyclones attained typhoon strength, two less than the normal figure.

The first tropical cyclone of the year formed in March. The monthly frequencies of the occurrence of tropical cyclones in the western North Pacific and the South China Sea in 2006 are shown in Figure 2.1.

During the year, seven tropical cyclones hit mainland China, three affected Taiwan, four affected Japan (including Ryukyu Islands), one made landfall over South Korea, seven traversed the Philippines, another three made landfall over Vietnam.

The most intense tropical cyclone in 2006 was Saomai (0608). Saomai had a maximum wind speed of about 215 km/h and a minimum sea-level pressure of about 920 hPa when it was located over the sea to the northeast of Taiwan.

Cimaron (0619) was the tropical cyclone with the most peculiar track in 2006. After forming over the western North Pacific on 27 October, Cimaron generally took on a west-northwesterly course under the influence of the westerly steering current south of the upper subtropical ridge of high pressure. Following the weakening of the upper subtropical ridge over the South China Sea, Cimaron became almost stationary from 1 to 2 November. Thereafter, Cimaron turned south-southwestwards and dissipated over the South China Sea under the influence of the intense northeast monsoon.

2.1.2 Tropical cyclones in Hong Kong's area of responsibility

Amongst those 27 tropical cyclones in 2006, 16 occurred inside Hong Kong's area of responsibility (i.e. the area bounded by 10°N, 30°N, 105°E and 125°E). This was near the 30-year (1961-1990) annual average of 16.4 (Table 2.1). Five of these 16 tropical cyclones developed within Hong Kong's area of responsibility. Altogether, 460 tropical cyclone warnings to ships and vessels were issued by the Hong Kong Observatory in 2006 (Table 4.2).

2.1.3 Tropical cyclones over the South China Sea

There were 13 tropical cyclones affecting the South China Sea (i.e. the area bounded by 10°N, 25°N, 105°E and 120°E) in 2006. Four of them formed over the area. Nine moved into the area from the western North Pacific.

2.1.4 Tropical cyclones affecting Hong Kong

Seven tropical cyclones affected Hong Kong in 2006 (Figure 2.2), which is near normal (Table 2.2). These seven tropical cyclones were Chanchu (0601), Jelawat (0602), Prapiroon (0606), Bopha (0609), the tropical depressions in August and September and Cimaron (0619).

The highest signal issued this year was Strong Wind Signal No. 3 when Chanchu, Prapiroon and the tropical depression affected Hong Kong in May, August and September respectively.

Jelawat in June, Bopha and the tropical depression in August and Cimaron in October to November only necessitated the issuance of the Standby Signal No. 1 in Hong Kong.

2.1.5 Tropical cyclone rainfall

Tropical cyclone rainfall (the total rainfall recorded at the Hong Kong Observatory from the time when a tropical cyclone is centred within 600 km of Hong Kong to 72 hours after it has dissipated or moved farther than 600 km away from Hong Kong) in 2006 was 1 007.3 mm. This is 37% above the normal of 737.9 mm and accounts for some 38% of the year's total rainfall of 2 627.8 mm.

The tropical depression which affected Hong Kong on 12-13 September brought 265.6 mm of rainfall to Hong Kong, which was the tropical cyclone bringing the most rainfall to Hong Kong in 2006.

2.2 Monthly overview

A monthly overview of tropical cyclones is given in this Section. Detailed reports on tropical cyclones affecting Hong Kong are presented in Section 3.

JANUARY AND FEBRUARY

No tropical cyclone occurred over the western North Pacific and the South China Sea in January and February.

MARCH

A tropical depression formed about 510 km south of Yap on 4 March. Drifting slowly over the western North Pacific in the next two days, it turned to the west-southwest on 6 March and weakened into an area of low pressure the following day.

APRIL

No tropical cyclone occurred over the western North Pacific and the South China Sea in April.

MAY

Chanchu (0601) developed as a tropical depression over the western North Pacific about 420 km west-southwest of Yap on 9 May. Tracking mainly towards the west-northwest, it traversed the central Philippines. Chanchu entered the South China Sea and strengthened into a typhoon on 13 May. Moving westwards initially after entering South China Sea, Chanchu turned to the north and headed towards the south China coast on 15 May. The maximum sustained winds near the centre reached 185 km/h from 15 May to early 16 May, and it was the most intense tropical cyclone on record to have entered the South China Sea in May. It took on a north-northeastward course on 17 May and weakened gradually following landfall near Shantou the next morning. Chanchu rampaged through the coastal areas of southeastern China during the day on 18 May. That evening, it entered the East China Sea and became an extratropical cyclone.

JUNE

Jelawat (0602) developed as a tropical depression about 410 km east-southeast of Xisha Dao in the early morning of 27 June and moved generally northwest across the central part of the South China Sea. It intensified into a tropical storm that night. The next day, Jelawat skirted the northeastern coast of Hainan. It weakened into a tropical depression that night. Jelawat made landfall near Zhanjiang in the morning of 29 June and weakened further into an area of low pressure over the western part of Guangdong later that day.

Ewiniar (0603) formed as a tropical depression over the western North Pacific about 380 km south-southeast of Yap in the morning of 30 June. It moved generally towards the north-northwest and strengthened gradually to a typhoon on 3 July. Ewiniar traversed the Ryukyu Islands on 8 July and turned north afterwards, moving across the East China Sea. In the coastal areas of Zhejiang, more than 7 600 Ningbo residents were evacuated and over eight thousand fishing vessels returned to Ningbo and Zhoushan for shelter. In the morning of 10 July, Ewiniar weakened into a severe tropical storm. It then landed over the southwestern coast of South Korea and weakened further into a tropical storm. Ewiniar became an extratropical cyclone later that day. In Ewiniar's rage over South Korea, eight people were killed or reported missing and a dozen injured. More than 2 200 hectares of farmland were flooded and hundreds of schools were closed. In addition, 55 flights were cancelled and 30 000 vessels returned to shore to seek shelter.

JULY

Bilis (0604) formed as a tropical depression over the western North Pacific about 410 km northeast of Yap in the night of 8 July and moved generally towards the northwest. In the night of 11 July, Bilis strengthened into a severe tropical storm and skirted the eastern part of Luzon Strait the next day. Its outer circulation brought heavy rain and landslides to the northern part of the Philippines. In the fury of Bilis, 14 people were killed, another seven were reported missing and 20 000 people lost their homes. In the night of 13 July, Bilis skirted northern Taiwan. High winds and heavy rain led to three deaths and two people missing. Agricultural losses on the island exceeded NT\$ 100 million. After traversing Taiwan Strait, Bilis made landfall over Fujian on 14 July. Moving inland, it weakened gradually and dissipated over Jiangxi the next day. Bilis inflicted severe damage to Fujian, Zhejiang, Hunan, Jiangxi, Guangdong and Guangxi. Altogether, 621 people were killed, another 208 were reported missing and 190 000 people were trapped by flood water. About 210 000 houses toppled, over 960 000 hectares of crops were affected and the direct economic losses exceeded RMB\$ 24 billion.

Kaemi (0605) developed into a tropical depression over the western North Pacific about 380 km south of Guam on 18 July. It moved towards the west-northwest and intensified gradually, reaching typhoon strength on 21 July. Kaemi moved across southern Taiwan in the early morning of 25 July. During its passage, six people were injured and 475 evacuated. Power supply to 81 000 homes on the island was suspended and more than 40 flights were cancelled. Agricultural losses reached NT\$ 77.38 million. Kaemi weakened into a severe tropical storm while traversing Taiwan Strait on the same day. It made landfall over Fujian that afternoon and continued to weaken afterwards. Kaemi finally dissipated over inland on 26 July. Kaemi brought severe damage to Anhui, Fujian, Jiangxi, Hunan and Guangdong. Altogether, 28 people were killed, another 36 were reported missing and 100 000 people were trapped by flood water. About 120 000 houses toppled, more than 480 000 hectares of crops were damaged and the direct economic losses exceeded RMB\$ 1.1 billion.

Prapiroon (0606) developed as a tropical depression about 260 km northeast of Manila in the afternoon of 31 July and moved westwards across Luzon. After entering the South China Sea, Prapiroon turned west-northwest on 1 August. It strengthened into a typhoon the next day and headed towards the western coast of Guangdong. Prapiroon made landfall to the east of Zhanjiang in the night of 3 August and started to weaken afterwards. It dissipated over Guangxi the following night.

AUGUST

In the morning of 5 August, **Maria (0607)** formed as a tropical depression over the western North Pacific about 610 km east of Iwo Jima. It moved west-northwest and intensified into a severe tropical storm on 6 August. Maria turned northeast two days later and skirted the seas south of Honshu, Japan. It weakened into a tropical storm on 9 August and became an extratropical cyclone the following night. During Maria's passage over the seas south of Honshu, an aircraft heading for Tokyo encountered turbulence and five passengers on board were injured.

Saomai (0608) developed as a tropical depression over the western North Pacific about 380 km southeast of Guam in the morning of 5 August. It moved generally northwest and intensified into a typhoon in the afternoon of 7 August. Saomai then took a steady west-northwesterly track towards the coast of eastern China. It became the most intense tropical cyclone in 2006 with estimated maximum sustained winds of 215 km/h in the evening of 9 August and the morning of 10 August. Saomai made landfall over Zhejiang in the night of 10 August. Moving inland, Saomai started to weaken and dissipated over Jiangxi the next day. Saomai brought severe damage to Zhejiang, Fujian and Jiangxi. In these provinces altogether, at least 460 people were killed, 1 350 injured and another 50 reported missing. About two million people were evacuated, 60 000 houses toppled and the direct economic losses exceeded RMB\$ 23.8 billion. In addition, one thousand fishing vessels were damaged in Fujian and the telecommunication system in coastal areas of Zhejiang was disrupted. More than 60 roads were closed in the two provinces.

Bopha (0609) developed as a tropical depression over the western North Pacific about 590 km southeast of Naha, Okinawa in the afternoon of 6 August and moved west-northwest. Bopha briefly attained the strength of a severe tropical storm during the day on 7 August. However, it weakened into a tropical storm that night and took a westerly track heading towards southern Taiwan. After skirting southern Taiwan, Bopha edged towards the coastal waters of eastern Guangdong. It weakened further into a tropical depression in the night of 9 August. Under the influence of Saomai, Bopha's movement was slow and erratic on 10 August. Bopha weakened into an area of low pressure that night.

A tropical depression named **Wukong (0610)** formed over the western North Pacific about 330 km south of Iwo Jima in the night of 12 August. While meandering towards the northwest, Wukong strengthened into a severe tropical storm on 15 August. Wukong weakened into a tropical storm two days later and made landfall over the southeast coast of Kyushu afterwards. After rampaging through Kyushu, Wukong became an extratropical cyclone in the night of 19 August. In the fury of Wukong, three people were killed, three injured and another one reported missing in Japan. About 110 people were evacuated and three houses were damaged. Electricity supply to about 200 families was suspended. In addition, 65 flights were cancelled.

Sonamu (0611) developed as a tropical depression over the western North Pacific about 980 km south of Naha, Okinawa in the early morning of 14 August and moved east-northeast. It strengthened into a tropical storm the same day. However, Sonamu started to weaken the following night and dissipated over the seas west of the Ogasawara Islands on 16 August.

A tropical depression developed over the northern part of the South China Sea about 210 km southeast of Haikou in the night of 23 August. It moved north initially but took a northeasterly track afterwards. The tropical depression turned northwest the following night, heading towards the western part of Guangdong. In the early morning of 25 August, the tropical depression made landfall near Yangjiang and weakened into an area of low pressure.

Having formed over the central part of the North Pacific, Typhoon [Ioke \(0612\)](#) crossed the International Date Line and entered the western North Pacific on 27 August. Ioke initially moved west-southwest, and turned west-northwest three days later. It turned northeast over the western North Pacific to the east of Japan on 5 September and weakened into a severe tropical storm in the morning of 6 September. Ioke became an extratropical cyclone that night.

SEPTEMBER

[Shanshan \(0613\)](#) developed as a tropical depression over the western North Pacific about 460 km north of Yap in the afternoon of 9 September, and moved northwest. It strengthened into a typhoon on 12 September and then took on a westerly track. Three days later, Shanshan turned north, skirting the seas east of Taiwan. Afterwards, Shanshan moved north-northeast and traversed northwestern Kyushu, Japan on 17 September. Shanshan weakened into a severe tropical storm on 18 September. It became an extratropical cyclone the following day. In the fury of Shanshan, nine people were killed in Japan, more than 320 injured and another one reported missing. About 12 000 people were evacuated. 40 houses were destroyed and another 190 damaged. Electricity supply to about 380 000 families was suspended. In addition, hundreds of flights were affected. A train was blown off the track and overturned. The southeastern part of South Korea was also affected by Shanshan. One person was injured and electricity supply to about 3 000 families was suspended. Ferry service between South Korea and Japan was suspended.

A tropical depression developed over the northern part of the South China Sea about 350 km east-northeast of Xisha in the afternoon of 12 September. It moved north initially but then took a west-northwesterly track. The tropical depression weakened into an area of low pressure over coastal waters of western Guangdong the following night.

[Yagi \(0614\)](#) developed as a tropical depression over the western North Pacific about 1450 km east-northeast of Guam in the early morning of 17 September and moved east slowly. Yagi turned west two days later and strengthened into a typhoon. Yagi took on a northwesterly track on 21 September. Two days later, it traversed the Ogasawara Islands and then turned northeast. Yagi weakened into a severe tropical storm on 24 September. It became an extratropical cyclone the next day.

A tropical depression developed over the central part of the South China Sea about 420 km south-southeast of Xisha in the night of 22 September and moved generally northwest. The tropical depression turned west on 24 September. It made landfall over the northern coast of Vietnam the next day and weakened into an area of low pressure.

[Xangsane \(0615\)](#) developed as a tropical depression over the western North Pacific about 900 km east-southeast of Manila in the night of 25 September and moved west-northwest. It strengthened into a typhoon two days later and rampaged through the Philippines. In the fury of Xangsane, over 207 people were killed in the Philippines, another 22 reported missing. Near two million people were made homeless, and another 43 million affected by power outage. Economic losses reached US\$ 240 million. After entering the South China Sea, Xangsane took on a westerly track on 29 September towards the central part of Vietnam across the central part of the South China Sea. Xangsane made landfall over central Vietnam near Da Nang on 1 October. Moving inland, Xangsane weakened and finally dissipated in Thailand the next day. Xangsane inflicted severe damage to Vietnam. Altogether, 42 people were killed, thousands injured and another seven

reported missing. 200 000 people were evacuated, 15 000 houses toppled and another 50 000 were flooded. In central Vietnam, electricity supply and telecommunication were disrupted. In addition, 48 flights were cancelled and 560 vessels sank or were damaged. Economic losses were about US\$ 630 million. Hainan, China was also affected by Xangsane. One person was killed, 12 were injured and 200 made homeless. 70 houses were damaged and seven thousand trees were blown down. Economic losses were about US\$ 800 000. In addition, ferry service across the Qiongzhou Haixia was suspended.

OCTOBER

Bebinca (0616) developed as a tropical depression over the western North Pacific about 1 270 km south-southeast of Naha, Okinawa early on 2 October, and moved slowly. Bebinca strengthened into a tropical storm the next day and accelerated to the north. It turned northeast on 4 October and became an extratropical cyclone two days later.

A tropical depression named **Rumbia (0617)** formed over the western North Pacific about 1 390 km east-southeast of Iwo Jima in the afternoon of 3 October. It moved north-northwest and strengthened into a tropical storm that night. Rumbia turned north on 5 October and dissipated over sea the next day.

Soulik (0618) developed as a tropical depression over the western North Pacific about 1 410 km east of Guam in the morning of 9 October and moved generally west-northwest. It strengthened into a typhoon on 12 October and turned north-northeast the next day, skirting the Ogasawara Islands. Soulik weakened into a severe tropical storm on 15 October and took on a northeasterly course. It became an extratropical cyclone the next day.

Cimaron (0619) developed as a tropical depression over the western North Pacific about 1 390 km east of Manila early on 27 October and moved west. After strengthening into a tropical storm the same day, Cimaron took on a west-northwesterly track towards Luzon. Cimaron strengthened into a typhoon on 28 October and traversed Luzon the following night. Cimaron entered the South China Sea on 30 October and turned towards northwest the next day. It slowed down on 1 November and became almost stationary. Cimaron weakened into a severe tropical storm in the night of 2 November and took on a south-southwesterly course and continued to weaken. It dissipated over the central part of the South China Sea to the south-southeast of Xisha on 6 November.

NOVEMBER

Chebi (0620) developed as a tropical depression over the western North Pacific about 1 240 km east of Manila on 9 November and moved west. Chebi intensified into a tropical storm in the evening and then a severe tropical storm in the next morning. It further intensified into a typhoon in the afternoon of 10 November and traversed Luzon the next day. In the Philippines, 1 person was killed, eight injured and three others missing. Many villages were affected by floods and more than 8 000 people were evacuated from their homes. After entering the South China Sea, Chebi turned to a west-southwest track and weakened into a severe tropical storm in the evening of 12 November. It then turned to a northwesterly track on 13 November and weakened to a tropical storm in the afternoon. Chebi continued to weaken to a tropical depression in the morning of 14 November and dissipated over the sea to the southeast of Hainan in the evening.

Durian (0621) developed as a tropical depression over the western North Pacific about 830 km east of Yap on 26 November and moved generally west-northwest. It intensified into a tropical storm in the afternoon. Durian intensified into a severe tropical storm on 28 November and further into a typhoon the next day. While moving west, it crossed the central part of the Philippines on 30 November. Heavy rain associated with Durian triggered widespread mudslides in the region. Over 570 people were killed and 746 missing. In addition, up to 120 000 houses were destroyed and over one million people affected. Power, communications and water supply were interrupted in the region. The damage to crops was estimated to be as high as US\$10 million. Typhoon Durian entered the central part of the South China Sea on 1 December on a westerly track. It changed to a west-southwesterly track on 3 December and then a southwesterly track the next day. Durian weakened into a severe tropical storm in the afternoon of 4 December and further into a tropical storm in the morning of 5 December, skirting the coasts of the southern part of Vietnam. Durian brought heavy rain and high winds to the southern part of Vietnam. 67 people were killed, 31 others missing and more than 450 people were injured. More than 120 000 homes were destroyed and over 1 000 fishing boats sank. In addition, power and communication lines were severely damaged and many trees were uprooted. Durian weakened into a tropical depression in the afternoon of 5 December and dissipated over the coastal areas of the southern part of Vietnam later in the afternoon.

DECEMBER

Utor (0622) developed as a tropical depression over the western North Pacific about 1 800 km east-southeast of Manila on 7 December. Moving west-northwestwards, Utor intensified into a tropical storm in the early morning and then a severe tropical storm in the evening of 8 December. It further intensified into a typhoon at noon the next day and started crossing the central Philippines in the afternoon. In the Philippines, at least seven were killed, 15 people missing and over 90 000 people were evacuated. Utor knocked out utilities and power lines, damaged resorts and houses, and caused severe flooding and several mudslides. Utor entered the South China Sea in the afternoon of 10 December and continued to move west-northwestwards. It turned to a northwesterly track on 12 December and then slowed down the next day as it turned to move northwards. Under the influence of the northeast monsoon, Utor weakened rapidly on 14 December and turned to move east-northeastwards. It first weakened into a tropical storm in the morning, then weakened further into a tropical depression in the afternoon. It dissipated over the South China Sea to the northeast of Xisha at night.

Trami (0623) developed as a tropical depression over the western North Pacific about 310 km northeast of Yap on 17 December and moved northwestwards. It intensified into a tropical storm in the early morning of 18 December and then turned on a west-northwesterly track. Trami weakened into a tropical depression in the morning of 19 December and dissipated over the western North Pacific to the east of Luzon in the afternoon.

Note: Casualties and damage figures were compiled from press reports.

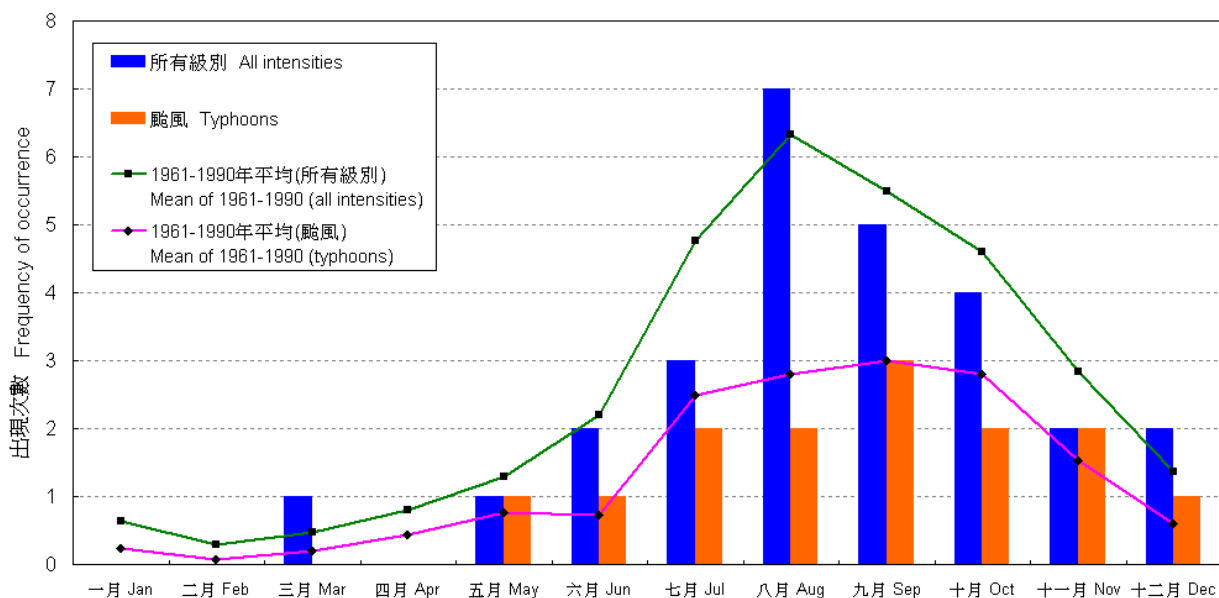


圖 2.1 二零零六年在北太平洋西部及南海區域的熱帶氣旋出現次數之每月分佈 (以熱帶氣旋在該月初次出現為準)。

Figure 2.1 Monthly frequencies of the occurrence of tropical cyclones in the western North Pacific and the South China Sea in 2006 (based on the first occurrence of the tropical cyclone in the month).

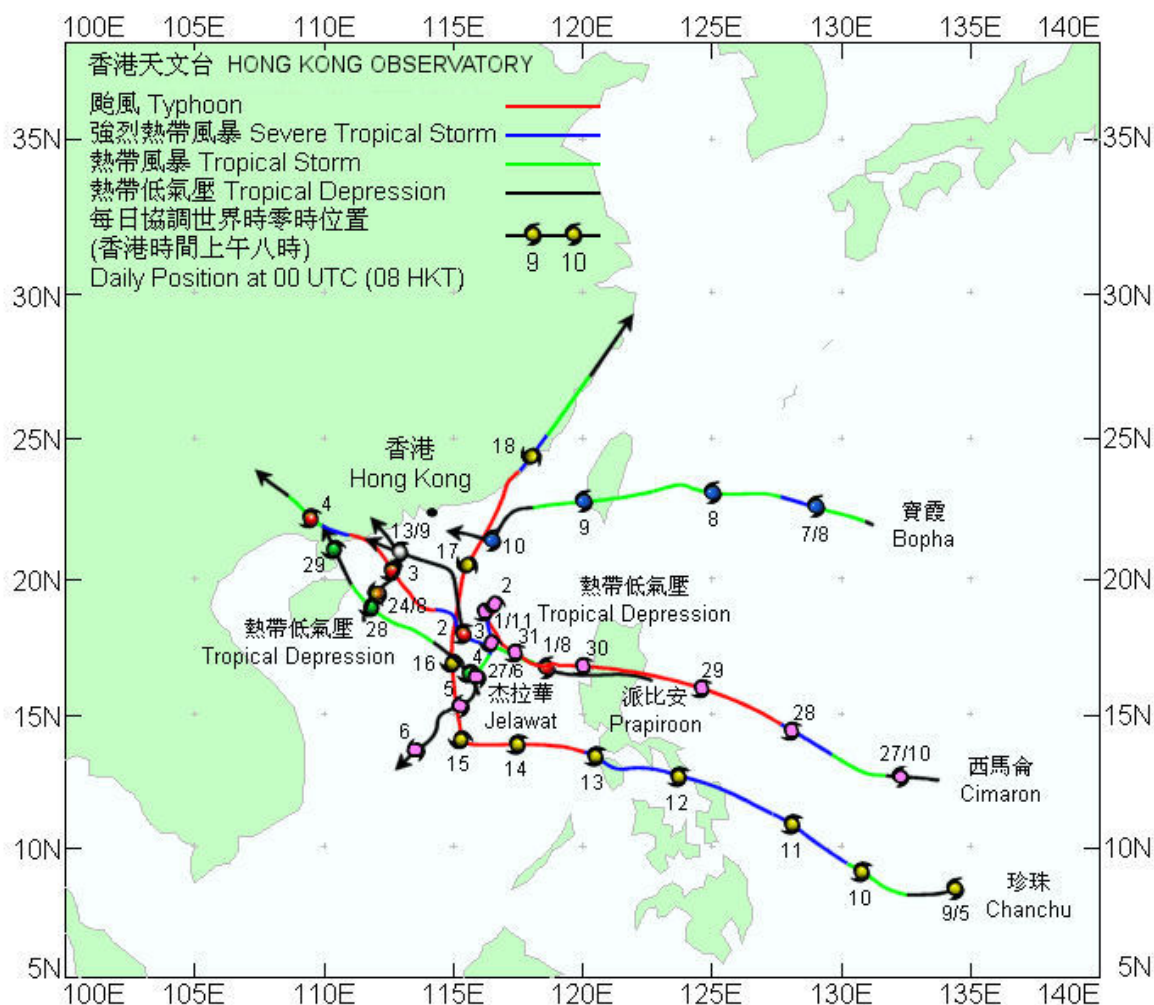


圖 2.2 二零零六年七個影響香港的熱帶氣旋的路徑圖。

Figure 2.2 Tracks of the seven tropical cyclones affecting Hong Kong in 2006.

表 2.1 在香港責任範圍內 (10°-30°N, 105°-125°E)熱帶氣旋出現之每月分佈
(以熱帶氣旋在該月初次出現為準)

TABLE 2.1 MONTHLY DISTRIBUTION OF THE OCCURRENCE OF TROPICAL CYCLONES IN HONG KONG'S AREA OF RESPONSIBILITY (10° - 30°N, 105° - 125°E), BASED ON THE FIRST OCCURRENCE OF THE TROPICAL CYCLONE IN THE MONTH

年份 Year	月份 Month												共 Total
	一月	二月	三月	四月	五月	六月	七月	八月	九月	十月	十一月	十二月	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1961					3	5	2	5	4	3	1	1	24
1962					3		4	5	4	1	3		20
1963						3	3	3	2			2	13
1964					1	1	5	3	6	3	6	1	26
1965	1				2	3	4	3	2		1		16
1966					2		5	2	3	2	2	1	17
1967			1	1		1	2	6	1	2	3		17
1968							2	4	2	1	3		12
1969							3	3	4	1			11
1970		1				2	2	3	4	5	3		20
1971				1	2	2	5	3	3	4			20
1972	1					3	2	4	2	1	1	1	15
1973							4	4	2	4	3		17
1974						3	2	4	2	4	4	2	21
1975	1					1		3	2	3	1	1	12
1976					1	1	1	4	1		1	1	10
1977						1	4	1	3		1		10
1978	1			1		2	2	4	5	4	1		20
1979				1	2	1	3	5	2	2	1	1	18
1980			1		3	1	5	2	3	1	1		17
1981						3	3	3	1	1	3	1	15
1982			2		1	1	3	3	3	1		2	16
1983						1	3	1	3	5	2		15
1984						2	2	4	2	2	2		14
1985						2	2	2	4	4	1		15
1986					1	1	1	4	1	3	3	2	16
1987						1	3	2	1	1	3	1	12
1988	1				1	3	1	1	2	5	2	1	17
1989					2	1	4	2	4	3	1		17
1990					1	4	2	3	3	3	2		18
1991				1	1	1	3	2	2	1	3		14
1992						2	3	2	2	2			11
1993						1	1	2	3	2	2	3	14
1994				1	1	2	6	5	2	2		1	20
1995						1	1	5	5	3	1	1	17
1996		1		1	2		3	3	2	1	2		15
1997					1		1	4	1	2	1		10
1998							1	3	4	3	3	1	15
1999				1		1	1	2	3	2	1	1	12
2000					2	1	3	5	3	3	2	1	20
2001					1	2	4	2	2	1	1	1	14
2002	1					1	3	2	3				10
2003				1	1	2	2	3	1	1	1		12
2004			1		1	3	2	2	2	1	2	1	15
2005			1				2	3	4	3	2		15
2006					1	1	3	3	4	1	2	1	16
正常 Normal	0.2	0.0	0.1	0.1	0.8	1.6	2.8	3.2	2.7	2.3	1.8	0.6	16.4

表 2.2 影響香港的熱帶氣旋之每月分佈

TABLE 2.2 MONTHLY DISTRIBUTION OF TROPICAL CYCLONES AFFECTING HONG KONG

年份 Year	月份 [#] Month [#]												共 Total
	一月	二月	三月	四月	五月	六月	七月	八月	九月	十月	十一月	十二月	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1961					1		3		2				6
1962							2	1		1			4
1963						1	1	1	1				4
1964					1	1		1	4	3			10
1965						1	2		2		1		6
1966					1		3	1	1				6
1967				1		1	1	3		1	1		8
1968							1	3	2				6
1969							1		2	1			4
1970							1	2	1	2			6
1971					1	2	3	1	1	1			9
1972						2	1	1			1		5
1973							2	3	2	2			9
1974						2	1		2	4	1	1	11
1975						1		1	2	3			7
1976						1	1	2	1				5
1977						1	3	1	3				8
1978				1			1	2	2	2			8
1979							2	2	2				6
1980					1	1	4	1	2	1			10
1981						1	2	1	1				5
1982						1	2		1	1			5
1983							3		2	2			7
1984						1	1	2	1				5
1985						1	1		2	1			5
1986							1	2		1			4
1987						1		2	1	1			5
1988					1	1	1		1	2			6
1989					1	1	2		1	2			7
1990					1	2	1	1	1				6
1991							3	1	2				6
1992						1	3	1					5
1993						1	1	2	3	1	1		9
1994						2		1	1				4
1995							1	4	2	1			8
1996							2	2	2	1			7
1997							1	1					2
1998								2	1	2			5
1999				1		1	1	1	3	1			8
2000						1	2	2	1		1		7
2001						2	2	1	1				6
2002								2	1				3
2003							2	1	1				4
2004						1	1	1					3
2005								1	2				3
2006					1	1		3	1	1			7
正常 Normal	0.0	0.0	0.0	0.1	0.3	0.8	1.6	1.1	1.4	1.0	0.1	0.0	6.4

[#] 熱帶氣旋警告信號首次發出的月份。

[#] The month that the tropical cyclone warning signal was first issued.

表 2.3 二零零六年香港熱帶氣旋警告信號的意義

TABLE 2.3 MEANING OF TROPICAL CYCLONE WARNING SIGNALS IN HONG KONG IN 2006

信號 Signals		顯示符號 Symbol Display	信號的意義 Meaning of Signals
戒備 Standby	1		有一熱帶氣旋集結於香港約800公里的範圍內，稍後可能影響本港。 A tropical cyclone is centred within about 800 km of Hong Kong and may later affect Hong Kong.
強風 Strong Wind	3		維多利亞港內吹強風或將有強風，持續風力每小時41至62公里，陣風更可能超過每小時110公里。 Strong wind is expected or blowing in the Victoria Harbour, with a sustained speed of 41-62 kilometres per hour (km/h), and gusts which may exceed 110 km/h.
西北 烈風或暴風 NW'LY Gale or Storm	8 西北 NW		維多利亞港內風力已達或將達每小時63至117公里之烈風或暴風程度，由所指之方向吹襲，而陣風可能超過每小時180公里。 Gale or storm force wind is expected or blowing in the Victoria Harbour, with a sustained wind speed of 63-117 km/h from the quarter indicated and gusts which may exceed 180 km/h.
西南 烈風或暴風 SW'LY Gale or Storm	8 西南 SW		
東北 烈風或暴風 NE'LY Gale or Storm	8 東北 NE		
東南 烈風或暴風 SE'LY Gale or Storm	8 東南 SE		
烈風或暴風 風力增強 Increasing Gale or Storm	9		
颶風 Hurricane	10		風力現正或預料會達到颶風程度，持續風力達每小時118公里或以上，陣風更可能超過每小時220公里。 Hurricane force wind is expected or blowing with sustained speed reaching upwards from 118 km/h and gusts that may exceed 220 km/h.