第二節　　二零二一年熱帶氣旋概述

2.1　二零二一年的熱帶氣旋回顧

2.1.1　北太平洋西部(包括南海區域)的熱帶氣旋

二零二一年有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），少於1961-2020年約30個的長期年平均數目。全年有10個熱帶氣旋達到颱風或以上強度，少於1961-2020年約15個的長期年平均數目，其中有五個熱帶氣旋更達到超強颱風程度(中心附近最高持續風速達到每小時185公里或以上)。

圖2.1是二零二一年在北太平洋西部及南海區域熱帶氣旋數目之逐月分佈。

二零二一年內有七個熱帶氣旋在中國登陸，其中一個在香港300公里內的華南沿岸登陸。四個橫過菲律賓及五個登陸越南。四月的超強颱風舒力基(2102)及九月的超強颱風燦都(2114)（圖2.3）皆是二零二一年北太平洋西部及南海區域最強的熱帶氣旋，其中心附近最高持續風速估計為每小時240公里，而最低海平面氣壓為910百帕斯卡（表4.1）。

2.1.2　香港責任範圍內的熱帶氣旋

在二零二一年的27個熱帶氣旋中，有17個出現在香港責任範圍（即北緯10至30度、東經105至125度），略多於 1961-2020年約16個的長期年平均數目（表2.1），當中有七個在香港責任範圍內形成。年內，香港天文台總共發出413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

二零二一年共有11個熱帶氣旋影響南海區域（即北緯10至25度、東經105至120度），略少於1961-2020年約12個的長期年平均數目，當中有七個在南海上形成。

2.1.4　影響香港的熱帶氣旋

二零二一年香港的颱風季節始於六月十一日，當天隨著熱帶低氣壓小熊(2104)在南海北部上形成，天文台發出一號戒備信號。香港入冬後一般甚少受熱帶氣旋直接威脅，然而強烈熱帶風暴雷伊(2122)在十二月下旬逐漸靠近廣東沿岸，天文台需要在十二月二十日發出一號戒備信號。這是自一九四六年以來年內最遲發出的熱帶氣旋警告。翌日雷伊迅速減弱及消散，二零二一年颱風季節隨著天文台當天取消所有熱帶氣旋警告信號而結束。

年內共有八個熱帶氣旋影響香港（圖2.2），較1961-2020年約六個的長期年平均數目偏多(表2.2)。這八個熱帶氣旋分別為六月的熱帶風暴小熊(2104)、七月的兩個熱帶低氣壓及颱風查帕卡(2107)、八月的熱帶風暴盧碧(2109)、十月的熱帶風暴獅子山(2117)及颱風圓規(2118)、十二月的超強颱風雷伊(2122)。天文台在獅子山及圓規影響香港期間，分別在十月九日及十月十二日發出八號烈風或風暴信號，是年內發出的最高熱帶氣旋警告信號。而兩個八號信號僅相距60小時40分鐘，是自一九六一年以來由兩個不同熱帶氣旋所引致的八號信號之時間相距最短的紀錄。查帕卡及盧碧吹襲本港期間天文台曾發出三號強風信號。其餘四個影響香港的熱帶氣旋均引致天文台發出一號戒備信號。

2.1.5 熱帶氣旋的雨量

二零二一年熱帶氣旋為香港帶來的雨量 (即由熱帶氣旋出現於香港600公里範圍內至其消散或離開香港600公里範圍之後72小時期間天文台總部錄得的雨量) 共為980.6毫米 (表4.8.1) ，約佔年內總雨量2307.1毫米的百分之42.5，較1961-2020年長期年平均值的704.2毫米多約百分之39.3。

根據上述的定義，熱帶風暴獅子山 (2117)為香港帶來的雨量為369.0毫米(表4.8.1)，是年內雨量最多的熱帶氣旋。

2.2 每月概述

這一節逐月介紹二零二一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及傷亡報告則詳述於第三節。

一月

二零二一年一月並無熱帶氣旋在北太平洋西部及南海區域上形成。

二月

熱帶低氣壓杜鵑(2101)於二月十八日早上在馬尼拉之東南偏東約1 520公里的北太平洋西部上形成，當晚增強為熱帶風暴。翌日早上杜鵑達到其最高強度，中心附近最高持續風速估計為每小時75公里。當晚及二月二十日杜鵑在菲律賓以東海域徘徊並減弱。杜鵑於二月二十一日採取西北路徑移向菲律賓，翌日早上在菲律賓減弱為低壓區。

根據報章報導，杜鵑為菲律賓帶來狂風暴雨，造成53 000人受災，超過180座房屋受損。

三月

二零二一年三月並無熱帶氣旋在北太平洋西部及南海區域上形成。

四月

熱帶低氣壓舒力基(2102)於四月十三日晚上在雅蒲島以南約230公里的北太平洋西部上形成，大致向西北偏西方向移動並逐漸增強。舒力基於四月十六日增強為颱風。在有利的大氣條件下，當晚舒力基開始迅速增強，翌日發展為超強颱風並達到其最高強度，中心附近最高持續風速估計為每小時240公里，成為自一九六一年以來四月份在北太平洋西部出現的最強熱帶氣旋。隨後四天舒力基向西北偏北緩慢移動，橫過菲律賓以東海域。舒力基於四月二十二日轉向東北方向移動，橫過琉球群島以南海域並逐漸減弱。舒力基最後於四月二十五日在日本以南的北太平洋西部演變為一股溫帶氣旋。

根據報章報導，在舒力基的吹襲下，一艘貨輪在菲律賓南部海域擱淺，造成四名船員死亡。

五月至六月

一個熱帶低氣壓於五月十三日凌晨在馬尼拉之東南約1 280公里的北太平洋西部上形成，大致向西移向菲律賓南部。當日早上該熱帶低氣壓達到其最高強度，中心附近最高持續風速估計為每小時55公里。隨後該熱帶低氣壓逐漸減弱，最後於五月十四日凌晨在菲律賓南部消散。

熱帶低氣壓彩雲(2103)於五月三十日早上在馬尼拉之東南偏東約1 700公里的北太平洋西部上形成，向西北偏西移動。彩雲於翌日增強為熱帶風暴，橫過菲律賓以東海域，並於六月一日凌晨達到其最高強度，中心附近最高持續風速估計為每小時75公里。隨後彩雲橫過菲律賓並進入南海。六月三日彩雲轉向北移動，並逐漸減弱。其後彩雲在六月四日再轉向東北移動，最後於六月五日凌晨在琉球群島一帶演變為一股溫帶氣旋。

根據報章報導，彩雲吹襲菲律賓期間，最少造成11人死亡，3人受傷及2人失縱，約9萬4千人受災。彩雲亦為台灣帶來暴雨及水浸，導致台北約5萬戶停電。

一個季風低壓於六月十一日下午在香港之西南偏南約500公里的南海北部上發展為熱帶低氣壓，大致向西北偏西移向海南島。該熱帶低氣壓於六月十二日早上橫過海南島，下午被命名為小熊(2104)。當日傍晚時分小熊在北部灣增強為熱帶風暴並達到其最高強度，中心附近最高持續風速估計為每小時65公里。小熊於六月十三日早上在越南北部登陸，下午在越南內陸減弱為低壓區。

根據報章報導，小熊吹襲越南期間造成最少1人死亡，2人失縱，最少130間房屋倒塌。

熱帶低氣壓薔琵(2105)於六月二十一日早上在關島之東南偏東約390公里的北太平洋西部上形成，大致向西北方向移動並逐漸增強。六月二十五日凌晨薔琵增強為強烈熱帶風暴，並轉向北或東北偏北方向移動。晚上薔琵進一步增強為颱風並達到其最高強度，中心附近最高持續風速估計為每小時120公里。隨後薔琵開始減弱，最後在六月二十七日於日本本州以東海域演變為一股溫帶氣旋。

七月

七月五日凌晨，一個低壓區在馬尼拉之東北偏東約740公里的北太平洋西部上發展為熱帶低氣壓，隨後向西北方向移動，橫過呂宋海峽。該熱帶低氣壓在當晚達到其最高強度，中心附近最高持續風速估計為每小時55公里。該熱帶低氣壓在七月六日早上掠過台灣西南沿岸海域並迅速減弱，中午過後在台灣海峽附近消散。

而另一個低壓區則在七月五日晚上於西沙之東南偏南約230公里的南海中部上增強為熱帶低氣壓。該熱帶低氣壓在七月六日大致採取西北至西北偏北路徑移向海南島，當晚達到其最高強度，中心附近最高持續風速估計為每小時55公里。七月七日該熱帶低氣壓橫過海南島西南部後進入北部灣，翌日登陸越南北部並減弱為低壓區。

熱帶低氣壓煙花(2106)於七月十七日凌晨在沖繩島之東南約1 110公里的北太平洋西部上形成，向西北偏北方向移動，並逐漸增強。七月十九日早上煙花增強為強烈熱帶風暴，並採取西至西南偏西路徑掠過琉球群島一帶。七月二十日晚上煙花進一步增強為颱風，翌日早上達到其最高強度，中心附近最高持續風速估計為每小時145公里。七月二十二日煙花移速減慢，隨後三天轉向西北偏北方向移動，橫過東海。煙花於七月二十六日在浙江北部沿岸登陸，並逐漸減弱，最後於七月二十九日在山東減弱為低壓區。

根據報章報導，在煙花的持續影響下，華東一帶有暴雨，多處地區水浸，超過270萬人受災，約1 100間房屋受損。

熱帶低氣壓查帕卡(2107)於七月十八日晚上在香港之西南偏南約180公里的南海北部上形成，大致向西北至西北偏西方向緩慢移動，趨向廣東西部沿岸並迅速增強。七月二十日凌晨查帕卡增強為颱風並達到其最高強度，中心附近最高持續風速估計為每小時120公里，晚上查帕卡開始減弱並在陽江附近登陸。查帕卡於七月二十一日橫過廣東西部及廣西內陸，逐步減弱為熱帶低氣壓。查帕卡翌日轉向西南偏南移動，七月二十三日進入北部灣。最後於七月二十四日在北部灣減弱為一個低壓區。

熱帶低氣壓尼伯特(2108)於七月二十三日晚上於硫磺島以東約710 公里的北太平洋西部上形成，七月二十四日凌晨尼伯特增強為熱帶風暴，隨後兩天大致向東北偏北方向移動及減弱為熱帶低氣壓，尼伯特於七月二十六日逐漸轉向偏西方向移動，橫過日本以東海域，晚上再增強為熱帶風暴。尼伯特於七月二十七日凌晨達到其最高強度，中心附近最高持續風速估計為每小時75公里。隨後尼伯特轉向西北方向移動，最後於七月二十八日在日本本州減弱為一個低壓區。

八月

熱帶低氣壓盧碧(2109)於八月二日晚上在香港之西南約280公里的南海北部上形成，大致向東北偏東方向橫過南海北部並逐漸增強。八月三日早上盧碧移速減慢，下午轉向東南移動。隨後盧碧於八月四日凌晨轉向東北移動，早上增強為熱帶風暴。八月五日凌晨盧碧達到其最高強度，中心附近最高持續風速估計為每小時85公里。當日下午及翌日盧碧掠過福建沿岸地區，並減弱為熱帶低氣壓。八月七日凌晨盧碧在台灣海峽再度增強為熱帶風暴，並採取東北路徑移向日本，最後於八月九日在日本本州以北海域演變為一股溫帶氣旋。

根據報章報導，盧碧為台灣及日本九州帶來暴雨及水浸。

熱帶低氣壓妮妲(2111)於八月四日下午在硫黃島之東北偏東約760 公里的北太平洋西部上形成，向北移動並逐漸增強。妮妲於八月五日增強為熱帶風暴，翌日轉向東至東北方向移動，橫過日本以東的北太平洋西部。妮妲於八月七日凌晨達到其最高強度，中心附近最高持續風速估計為每小時85公里。妮妲於八月八日在日本以東的北太平洋西部演變為一股溫帶氣旋。

熱帶低氣壓銀河(2110)於八月五日早上在沖繩島之西南偏西約60公里的北太平洋西部上形成，大致向東北偏東方向移動並逐漸增強。銀河在八月八日凌晨發展為強烈熱帶風暴並達到其最高強度，中心附近最高持續風速估計為每小時90公里。銀河於八月九日在日本以東海域演變為一股溫帶氣旋。

熱帶低氣壓奧麥斯(2112)於八月十一日在威克島之東南偏東約1 430公里的北太平洋西部上形成，向西移動。奧麥斯於八月十六日在關島以東海域減弱為一個低壓區，其殘餘隨後四日繼續向西北偏西方向移動。與奧麥斯相關的殘餘低壓區於八月二十日下午在沖繩島之東南偏南約890 公里的北太平洋西部上再度增強為熱帶低氣壓，並轉向西北方向移動。奧麥斯於八月二十一日增強為熱帶風暴並達到其最高強度，中心附近最高持續風速估計為每小時85公里。奧麥斯於八月二十二日橫過琉球群島一帶後轉向北移動並逐漸減弱，翌日於濟州島附近海域演變為一股溫帶氣旋。

九月至十月

一個熱帶低氣壓於九月一日晚上在威克島之西北約 900 公里的北太平洋西部上形成，向西北偏西移動。九月二日早上該熱帶低氣壓達到其最高強度，中心附近最高持續風速估計為每小時55公里。隨後兩日該熱帶低氣壓逐漸轉向東北方向移動，最後於九月四日在日本以東的北太平洋西部上演變為一股溫帶氣旋。

熱帶低氣壓康森(2113)於九月五日下午在馬尼拉之東南偏東約1 140公里的北太平洋西部上形成，向西北方向移動並逐漸增強。九月七日上午康森增強為強烈熱帶風暴並達到其最高強度，中心附近最高持續風速估計為每小時90公里。康森在九月八日橫過菲律賓中部後稍為減弱，轉向偏西方向橫過南海中部。康森在九月九日晚上再度增強為強烈熱帶風暴。九月十一日上午康森減弱為熱帶風暴，隨後移動速度減慢並在越南以東的南海中部徘徊，最後康森於九月十二日晚上在越南中部沿岸海域減弱為一個低壓區。

根據報章報導，康森吹襲菲律賓期間，造成20人死亡，24人受傷，至少7 人失踪，此外，康森亦令當地約9 000幢建築物受損。

熱帶低氣壓燦都(2114)於九月六日下午在馬尼拉以東約1 880公里的北太平洋西部上形成，初時向西或西北偏西方向移動並迅速增強。燦都於九月八日早上增強為超強颱風，並於九月十日晚上達到其最高強度，中心附近最高持續風速估計為每小時240公里。隨後燦都逐漸減弱並轉向偏北方向移動，橫過台灣以東海域。九月十四日及十五日燦都移速減慢並在東海徘徊。九月十六日燦都開始加速向東至東北移動，翌日先後橫過日本九州及四國，最後於九月十八日在日本本州以東海域演變為一股溫帶氣旋。

根據報章報導，受燦都影響，台灣有超過80 000戶停電。燦都吹襲日本期間，鐵路及航空服務暫停。

熱帶低氣壓電母(2115)於九月二十二日晚上在西沙之東南偏南約460 公里的南海南部上形成，向西北偏西移動並逐漸增強。九月二十三日晚上電母增強為熱帶風暴並達到其最高強度，中心附近最高持續風速估計為每小時65公里。九月二十四日凌晨電母在越南中部登陸後轉向西移動並減弱，日間在中南半島減弱為一個低壓區。

熱帶低氣壓蒲公英(2116)於九月二十三日凌晨在關島之東南約340公里的北太平洋西部上形成，向西北偏西方向移動並逐漸增強。九月二十四日晚上蒲公英發展為強烈熱帶風暴，轉向西北方向移動並迅速增強。九月二十六日蒲公英進一步發展為超強颱風並達到其最高強度，中心附近最高持續風速估計為每小時220公里。隨後三日蒲公英向偏北方向移動，並在九月三十日轉向東北，移向日本以東海域。最後蒲公英於十月二日在日本以東海域演變為一股溫帶氣旋。

一個季風低壓於十月七日下午在三亞之東南偏東約290公里的南海中部上發展為熱帶低氣壓，大致向西北移向海南島。該熱帶低氣壓在十月八日上午被命名為獅子山(2117)，並增強為熱帶風暴。當日下午獅子山達到其最高強度，中心附近最高持續風速估計為每小時75公里。十月九日獅子山橫過海南島，期間路徑較為飄忽，以逆時針方向轉了一個圈。當日下午獅子山轉向西北偏西方向移動，在晚上進入北部灣。十月十日晚上獅子山在越南北部沿岸減弱為低壓區。

根據報章報導，獅子山在澳門造成六人受傷。此外，獅子山亦為珠海帶來暴雨，多處地區水浸。

圓規(2118)於十月八日晚上在馬尼拉以東約1020公里的北太平洋西部上發展為熱帶低氣壓，初時向偏北方向移動，並逐漸增強。十月十日圓規加速向偏西方向移動，十月十一日發展為強烈熱帶風暴及橫過呂宋海峽。圓規在十月十二日向西橫過南海北部，翌日早上進一步發展為颱風並達到其最高強度，中心附近最高持續風速估計為每小時120公里。十月十三日圓規橫過海南島並迅速減弱，十月十四日在北部灣減弱為低壓區。

根據報章報導，圓規吹襲菲律賓期間，造成40人死亡，5人受傷，17人失踪，超過五十萬人須要撤離。此外，圓規帶來的暴雨令廣東鹽田港及海南島的三個港口關閉，海上運輸服務暫停。

熱帶低氣壓南川(2119)於十月九日晚上在威克島之西南偏西約550公里的北太平洋西部上形成，向西北偏西方向移動並逐漸增強。南川於十月十二日轉向北移動，翌日再向東北漂移。南川在十月十六日早上增強為強烈熱帶風暴並達到其最高強度，中心附近最高持續風速估計為每小時90 公里。南川隨後迅速減弱，最後於十月十七日在威克島以北的北太平洋西部演變為一股溫帶氣旋。

熱帶低氣壓瑪瑙於(2120)十月二十四日早上在雅蒲島之東北約340公里的北太平洋西部上形成，大致向北移動並逐漸增強。瑪瑙於十月二十七日晚上增強為颱風，並轉向東北偏北移動。十月二十八日下午瑪瑙達到其最高強度，中心附近最高持續風速估計為每小時140 公里。瑪瑙隨後逐漸減弱，最後於十月二十九日在日本以東海域演變為一股溫帶氣旋。

一個熱帶低氣壓於十月二十四日下午在南沙以東約280公里的南海南部上形成，向西或西北偏西移動。十月二十六日下午該熱帶低氣壓達到其最高強度，中心附近最高持續風速估計為每小時55 公里。十月二十七日該熱帶低氣壓在越南南部減弱為一個低壓區。

十一月至十二月

熱帶低氣壓妮亞圖(2121)於十一月二十九日晚上在雅蒲島之東北約450公里的北太平洋西部上形成，向西北偏西方向移動，移向菲律賓以東海域並逐漸增強。妮亞圖於十二月一日早上增強為強烈熱帶風暴，隨後逐漸轉向東北方向移動，移向硫磺島一帶並持續增強。妮亞圖於十二月三日凌晨進一步增強為超強颱風並達到其最高強度，中心附近最高持續風速估計為每小時185公里。當晚妮亞圖減弱為強颱風，最後在硫磺島以東海域演變為一股溫帶氣旋。

熱帶低氣壓雷伊(2122)於十二月十二日晚上在馬尼拉之東南偏東約2 680公里的太平洋西部上形成，向西北偏西方向移動並逐漸增強。雷伊於十二月十五日開始迅速增強，翌日發展為超強颱風。雷伊橫過菲律賓後減弱為強颱風，十二月十七日向西移動，橫過南海南部。雷伊翌日再度增強為超強颱風，成為自一九六一年以來首個在十二月於南海出現的超強颱風。十二月十九日凌晨雷伊達到其最高強度，中心附近最高持續風速估計為每小時205公里。隨後兩日雷伊逐漸轉向東北方向移動，靠近廣東沿岸並迅速減弱，最後於十二月二十一日在香港以南海域減弱為一個低壓區。

根據報章報導，雷伊吹襲菲律賓期間造成最少409人死亡，超過十萬人需要撤離。

備註：人命傷亡及財物損毀數據是根據報章報導輯錄而成。

Section 2 TROPICAL CYCLONE OVERVIEW FOR 2021

2.1 Review of tropical cyclones in 2021

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

In 2021, a total of 27 tropical cyclones occurred over the western North Pacific (WNP) and the South China Sea (SCS) bounded by the Equator, 45°N, 100°E and 180°, less than the long-term (1961 - 2020) average figure of around 30. During the year, 10 of the tropical cyclones attained typhoon intensity or above, less than the long-term average (1961 - 2020) of about 15, with five of them reaching super typhoon intensity (maximum 10-minute wind speed of 185 km/h or above near the centre).

Figure 2.1 shows the monthly frequencies of the occurrence of tropical cyclones in WNP and SCS in 2021.

During the year, seven tropical cyclones made landfall over China, with one of them crossing the south China coast within 300 km of Hong Kong. Four traversed the Philippines and five made landfall over Vietnam. With an estimated maximum sustained wind speed of 240 km/h and a minimum sea-level pressure of 910 hPa near the centre (Table 4.1), Super Typhoon Surigae (2102) and Super Typhoon Chanthu (2114) in September (Figure 2.3) were the most intense tropical cyclones over the WNP and the SCS in 2021.

2.1.2 Tropical cyclones in Hong Kong's area of responsibility

Amongst the 27 tropical cyclones in 2021, 17 of them occurred inside Hong Kong's area of responsibility (i.e. the area bounded by 10°N, 30°N, 105°E and 125°E), slightly more than the long-term annual average (1961-2020) figure of around 16 (Table 2.1). Seven of them developed within Hong Kong's area of responsibility. Altogether, 413 tropical cyclone warnings to ships and vessels were issued by the Hong Kong Observatory this year (Table 4.2).

2.1.3 Tropical cyclones over the South China Sea

11 tropical cyclones affected SCS bounded by 10°N, 25°N, 105°E and 120°E in 2021, slightly less than the long-term annual average (1961-2020) of around 12. Seven of them formed over the SCS.

2.1.4 Tropical cyclones affecting Hong Kong

In 2021, the typhoon season in Hong Kong started on 11 June when Tropical Depression Koguma (2104) formed over the northern part of the SCS, necessitating the issuance of the Standby Signal No. 1. It is rare to have tropical cyclones directly threatening Hong Kong in winter. However, as Severe Tropical Storm Rai (2122) gradually edged closer to the coast of Guangdong in late December, the Observatory issued the Standby Signal No. 1 on 20 December. This is the latest tropical cyclone warning signal in a year since 1946. When Rai weakened rapidly and dissipated the next day, the typhoon season ended with the cancellation of all tropical cyclone warning signals on that day.

Eight tropical cyclones affected Hong Kong during 2021 (Figure 2.2), more than the long-term (1961-2020) average of about six in a year (Table 2.2). They were Tropical Storm Koguma (2104) in June, two Tropical Depressions and Typhoon Cempaka (2107) in July, Tropical Storm Lupit (2109) in August, Tropical Storm Lionrock (2117) and Typhoon Kompasu (2118) in October, Super Typhoon Rai (2122) in December. The No. 8 Gale or Storm Signal was issued during the passage of Lionrock and Kompasu on 9 and 12 October respectively, the highest tropical cyclone warning signal issued in 2021. The time separation between these two No. 8 signals was only 60 hours 40 minutes, the shortest record of break time between two No. 8 signals for two tropical cyclones since 1946. The No. 3 Strong Wind Signal was issued during the passage of Cempaka and Lupit. The rest of the four tropical cyclones all necessitated the issuance of the Standby Signal No. 1 in Hong Kong.

2.1.5 Tropical cyclone rainfall

Tropical cyclone rainfall for Hong Kong (total rainfall recorded at the Hong Kong Observatory Headquarters from the time when a tropical cyclone comes within 600 km of Hong Kong to 72 hours after it has dissipated or moved more than 600 km away from Hong Kong) in 2021 was 980.6 mm (Table 4.8.1). This accounted for approximately 42.5 % of the year's total rainfall of 2307.1 mm and was about 39.3% higher than the 1961-2020 long-term average of 704.2 mm.

According to the above definition, Tropical Storm Lionrock (2117) brought 369.0 mm of rainfall to Hong Kong (Table 4.8.1) and was the wettest tropical cyclone in 2021.

2.2 Monthly overview

A monthly overview of tropical cyclones in 2021 is given in this section. Detailed reports on tropical cyclones affecting Hong Kong, including reports of damage, are presented in Section 3.

JANUARY

No tropical cyclone formed over the western North Pacific and the South China Sea in January 2021.

FEBRUARY

Dujuan (2101) formed as a tropical depression over the western North Pacific about 1 520 km east-southeast of Manila on the morning of 18 February. Dujuan developed into a tropical storm that night, reaching its peak intensity the next morning with an estimated sustained wind of 75 km/h near its centre. Dujuan lingered over the seas east of the Philippines and weakened that night and on 20 February. It tracked northwestward towards the Philippines on 21 February and degenerated into an area of low pressure over the Philippines the next morning.

According to press reports, Dujuan brought squalls and torrential rain to the Philippines. More than 53 000 people were affected and over 180 houses were damaged.

MARCH

No tropical cyclone formed over the western North Pacific and the South China Sea in March 2021.

APRIL

Surigae (2102) formed as a tropical depression over the western North Pacific about 230 km south of Yap on the night of 13 April. Moving generally west-northwestwards, it intensified gradually. Surigae intensified into a typhoon on 16 April. Under favourable atmospheric conditions, Surigae started to intensify rapidly that night. It developed into a super typhoon the next day and reached its peak intensity with an estimated sustained wind of 240 km/h near its centre, making it the most intense tropical cyclone over the western North Pacific in April since 1961. It then moved north-northwestwards slowly across the seas east of the Philippines in the following four days. Surigae turned to move northeastwards across the seas south of Ryukyu Islands on 22 April and weakened gradually. It finally evolved into an extratropical cyclone over the western North Pacific south of Japan on 25 April.

According to press reports, a cargo ship ran aground over the seas of the southern Philippines during the passage of Surigae, killing four crew members on board.

MAY TO JUNE

A tropical depression formed over the western North Pacific about 1 280 km southeast of Manila on the small hours of 13 May and moved generally westwards towards the southern part of the Philippines. The tropical depression reached its peak intensity in the morning with an estimated sustained wind of 55 km/h near its centre. It weakened gradually afterwards and finally dissipated over the southern part of the Philippines in the small hours on 14 May.

Choi-wan (2103) formed as a tropical depression over the western North Pacific about 1 700 km east-southeast of Manila on the morning of 30 May and moved west-northwestwards. It intensified into a tropical storm the next day and moved across the seas east of the Philippines. Choi-wan reached its peak intensity with an estimated maximum sustained wind of 75 km/h near its centre in the small hours on 1 June. It moved across the Philippines afterwards and entered the South China Sea. Choi-wan turned to move northwards on 3 June and weakened gradually. It then moved northeastwards on 4 June and finally evolved into an extratropical cyclone over the vicinity of the Ryukyu Islands in the small hours on 5 June.

According to press reports, Choi-wan left at least 11 deaths, 3 injuries and 2 missing in the Philippines during its passage. Near 94 000 people were affected. Choi-wan also brought torrential rain and flooding to Taiwan. Electricity supply to around 50 000 households was interrupted in Taibei.

A monsoon depression developed into a tropical depression over the northern part of the South China Sea about 500 km south-southwest of Hong Kong on the afternoon of 11 June. It generally tracked west-northwestward towards Hainan Island. The tropical depression moved across Hainan Island on the morning of 12 June and was named Koguma (2104) in the afternoon. Koguma intensified into a tropical storm over Beibu Wan in that evening and reached its peak intensity with an estimated maximum sustained wind of 65 km/h near its centre. It made landfall over the northern part of Vietnam on the morning of 13 June and degenerated into an area of low pressure over inland Vietnam in the afternoon.

According to press reports, Koguma left at least 1 death and 2 missing during its passage to Vietnam. At least 130 houses were collapsed.

Champi (2105) formed as a tropical depression over the western North Pacific about 390 km east-southeast of Guam on the morning of 21 June. It generally moved northwestwards and intensified gradually. Champi intensified into a severe tropical storm in the small hours on 25 June and turned to move north or north-northeastwards. Champi further intensified into a typhoon that night and reached its peak intensity with an estimated maximum sustained wind of 120 km/h near its centre. Champi started to weaken afterwards and finally evolved into an extratropical cyclone over the seas east of Honshu, Japan on 27 June.

JULY

The area of low pressure over the western North Pacific around 740 km east-northeast of Manila developed into a tropical depression in the small hours on 5 July. The tropical depression then moved northwestwards across the Luzon Strait. It reached its peak intensity that night with an estimated sustained wind of 55 km/h near its centre. The tropical depression skirted past the southwestern coastal waters of Taiwan and weakened rapidly on the morning of 6 July. It dissipated near the Taiwan Strait shortly after noon.

Another area of low pressure over the central part of the South China Sea around 230 km south-southeast of Xisha intensified into a tropical depression on the night of 5 July. It tracked generally northwest to north-northwestwards towards Hainan Island on 6 July and reached its peak intensity that night with an estimated sustained wind of 55 km/h near its centre. After moving across the southwestern part of Hainan Island, the tropical depression entered Beibu Wan on 7 July. It made landfall over the northern part of Vietnam the next day and then weakened into an area of low pressure.

In-fa (2106) formed as a tropical depression over the western North Pacific about 1 110 km southeast of Okinawa in the small hours on 17 July. It moved north-northwestwards and intensified gradually. In-fa intensified into a severe tropical storm on the morning of 19 July, and took a west to west-southwesterly track to skirt past the vicinity of Ryukyu Islands. It further intensified into a typhoon on the night of 20 July and reached its peak intensity with an estimated maximum sustained wind of 145 km/h near its centre in the next morning. In-fa slowed down on 22 July and turned to move north-northwestwards across the East China Sea in the following three days. In-fa made landfall over the coast of the northern part of Zhejiang on 26 July and weakened gradually. It finally degenerated into an area of low pressure over Shandong on 29 July.

According to press reports, there were torrential rain and extensive flooding over the vicinity of eastern China under the persistent influence of In-fa. More than 2.7 million people were affected and around 1 100 houses were damaged.

Cempaka (2107) formed as a tropical depression over the northern part of the South China Sea about 180 km south-southwest of Hong Kong on the night of 18 July. It moved generally northwest to west-northwestwards slowly towards the coast of western Guangdong and intensified rapidly. Cempaka intensified into a typhoon in the small hours on 20 July and reached its peak intensity with an estimated maximum sustained wind of 120 km/h near its centre. It started to weaken at night and made landfall near Yangjiang. Cempaka moved across western Guangdong and inland Guangxi, and weakened into a tropical depression progressively on 21 July. It turned to move south-southwestwards the next day and entered Beibu Wan on 23 July. Cempaka finally degenerated into an area of low pressure over Beibu Wan on 24 July.

Nepartak (2108) formed as a tropical depression over the western North Pacific about 710 km east of Iwo Jima on the night of 23 July and intensified into a tropical storm in the small hours on 24 July. It generally moved north-northeastwards in the following two days, and weakened into a tropical depression. Nepartak then gradually turned to move westwards across the seas east of Japan on 26 July and re-intensified into a tropical storm that night. Nepartak reached its peak intensity with an estimated maximum sustained wind of 75 km/h near its centre in the small hours on 27 July. It then turned to move northwestwards and finally weakened into an area of low pressure over Honshu of Japan on 28 July.

AUGUST

Lupit (2109) formed as a tropical depression over the northern part of the South China Sea at about 280 km southwest of Hong Kong on the night of 2 August. It moved generally east-northeastwards across the northern part of the South China Sea and intensified gradually. Lupit slowed down on the morning of 3 August and turned to move southeastwards in the afternoon. It then turned to move northeastwards in the small hours on 4 August and intensified into a tropical storm in the morning. Lupit reached its peak intensity in the small hours on 5 August with an estimated maximum sustained wind of 85 km/h near its centre. It skirted past the coastal areas of Fujian in the afternoon and the next day, and weakened into a tropical depression. Lupit re-intensified into a tropical storm over the Taiwan Strait in the small hours on 7 August and tracked northeastwards towards Japan. It finally evolved into an extratropical cyclone over the seas north of Honshu of Japan on 9 August.

According to press reports, Lupit brought torrential rain and flooding to Kyushu of Japan and Taiwan.

Nida (2111) formed as a tropical depression over the western North Pacific about 760 km east-northeast of Iwo Jima on the afternoon of 4 August. It tracked northwards and intensified gradually. Nida intensified into a tropical storm on 5 August and turned to move east to northeastwards across the western North Pacific east of Japan the next day. Nida reached its peak intensity in the small hours on 7 August with an estimated maximum sustained wind of 85 km/h near its centre. It evolved into an extratropical cyclone over the western North Pacific east to Japan on 8 August.

Mirinae (2110) formed as a tropical depression over the western North Pacific about 60 km west-southwest of Okinawa on the morning of 5 August. It moved generally east-northeastwards and intensified gradually. Mirinae developed into a severe tropical storm in the small hours on 8 August and reached its peak intensity with an estimated maximum sustained wind of 90 km/h near its centre. It evolved into an extratropical cyclone over the seas east of Japan on 9 August.

Omais (2112) formed as a tropical depression over the western North Pacific about 1 430 km east-southeast of Wake Island on 11 August and moved westwards. It weakened into an area of low pressure over the seas east of Guam on 16 August and its remnant continued to track west-northwestwards in the following four days. The low pressure area associated with the remnant of Omais re-intensified into a tropical depression over the western North Pacific about 890 km south-southeast of Okinawa on the afternoon of 20 August. It turned to move northwestwards and intensified into a tropical storm on 21 August, reaching its peak intensity with an estimated maximum sustained wind of 85 km/h near its centre. After moving across the vicinity of Ryukyu Islands on 22 August, Omais turned to move northwards and weakened gradually. It evolved into an extratropical cyclone over the seas near Jeju Island the next day.

SEPTEMBER TO OCTOBER

A tropical depression formed over the western North Pacific about 900 km northwest of Wake Island on the night of 1 September and moved west-northwestwards. The tropical depression reached its peak intensity on the morning of 2 September with an estimated maximum sustained wind of 55 km/h near its centre. It turned to move northeastwards gradually in the following two days. The tropical depression finally evolved into an extratropical cyclone over the western North Pacific to the east of Japan on 4 September.

Conson (2113) formed as a tropical depression over the western North Pacific about 1 140 km east-southeast of Manila on the afternoon of 5 September. It moved northwestwards and intensified gradually. Conson intensified into a severe tropical storm and reached its peak intensity on the morning of 7 September with an estimated maximum sustained wind of 90 km/h near its centre. After sweeping across the central part of the Philippines on 8 September, Conson slightly weakened and turned to move westwards across the central part of the South China Sea. It re-intensified into a severe tropical storm again on the night of 9 September. Conson weakened into a tropical storm on the morning of 11 September. Conson then slowed down and lingered over the central part of the South China Sea to the east of Vietnam. Conson finally degenerated into an area of low pressure over the coastal waters of the central part of Vietnam on the night of 12 September.

According to press reports, Conson left 20 deaths, 24 injuries and at least 7 missing in the Philippines during its passage. Besides, about 9 000 buildings were damaged.

Chanthu (2114) formed as a tropical depression over the western North Pacific about 1 880 km east of Manila on the afternoon of 6 September. It moved west or west-northwestwards at first and intensified rapidly. Chanthu intensified into a super typhoon on the morning of 8 September and reached its peak intensity on the night of 10 September with an estimated maximum sustained wind of 240 km/h near its centre. Chanthu then weakened gradually and turned to move northwards across the seas east of Taiwan. It slowed down and lingered over the East China Sea on 14 and 15 September. Chanthu started to pick up speed and turned to move east to northeastwards on 16 September. It swept across Kyushu and Shikoku of Japan next day and finally evolved into an extratropical cyclone over the seas east of Honshu, Japan on 18 September.

According to press reports, there were more than 80 000 households without electricity supply in Taiwan under the influence of Chanthu. Railways and aviation services in Japan were suspended during the passage of Chanthu.

Dianmu (2115) formed as a tropical depression over the southern part of the South China Sea about 460 km south-southeast of Xisha on the night of 22 September. It moved west-northwestwards and intensified gradually. Dianmu intensified into a tropical storm on the night of 23 September and reached its peak intensity with an estimated maximum sustained wind of 65 km/h near its centre. Dianmu weakened and turned to move westwards after it made landfall over the central part of Vietnam in the small hours on 24 September. It degenerated into an area of low pressure over Indochina Peninsula during the day.

Mindulle (2116) formed as a tropical depression over the western North Pacific about 340 km southeast of Guam in the small hours on 23 September. It moved west-northwestwards and intensified gradually. Mindulle developed into a severe tropical storm on the night of 24 September. It turned to move northwestwards and intensified rapidly. Mindulle further developed into a super typhoon on 26 September and reached its peak intensity with an estimated maximum sustained wind of 220 km/h near its centre. It tracked northwards in the following three days and turned to move northeastwards towards the seas east of Japan on 30 September. Mindulle finally evolved into an extratropical cyclone over the seas east of Japan on 2 October.

A monsoon depression developed into a tropical depression over the central part of the South China Sea about 290 km east-southeast of Sanya on the afternoon of 7 October. It generally tracked northwestwards towards Hainan Island. The tropical depression was named Lionrock (2117) on the morning of 8 October and intensified into a tropical storm. Lionrock reached its peak intensity in the afternoon with an estimated maximum sustained wind of 75 km/h near its centre. When Lionrock moved across Hainan Island on 9 October, it took on an erratic track and made an anti-clockwise loop. Lionrock turned to move west-northwestwards in that afternoon and entered Beibu Wan at night. It degenerated into an area of low pressure over the coast of northern Vietnam on the night of 10 October.

According to press reports, Lionrock left six injuries in Macao. Besides, it also brought torrential rain to Zhuhai and triggered extensive flooding.

Kompasu (2118) developed as a tropical depression over the western North Pacific about 1 020 km east of Manila on the night of 8 October. It moved northwards at first and intensified gradually. Kompasu picked up speed to move westwards on 10 October. It developed into a severe tropical storm and moved across the Luzon Strait on 11 October. Kompasu moved westwards across the northern part of the South China Sea on 12 October. It further developed into a typhoon on the morning of next day, reaching its peak intensity with an estimated sustained wind of 120 km/h near its centre. Kompasu moved across Hainan Island on 13 October and weakened rapidly. It degenerated into an area of low pressure over Beibu Wan on 14 October.

According to press reports, Kompasu left 40 deaths, 5 injuries, 17 missing and over 500 000 people evacuated in the Philippines during its passage. Besides, the Yantian Port in Guangdong and 3 ports in Hainan Island were closed and the marine transportation services were suspended because of the torrential rain brought by Kompasu.

Namtheun (2119) formed as a tropical depression over the western North Pacific about 550 km west-southwest of Wake Island on the night of 9 October. It moved west-northwestwards and intensified gradually. Namtheun turned to move northwards on 12 October and drifted northeastwards the next day. Namtheun intensified into a severe tropical storm and reached its peak intensity on the morning of 16 October with an estimated maximum sustained wind of 90 km/h near its centre. It then weakened rapidly and finally evolved into an extratropical cyclone over the western North Pacific to the north of Wake Island on 17 October.

Malou (2120) formed as a tropical depression over the western North Pacific about 340 km northeast of Yap Island on the morning of 24 October. It generally moved northwards and intensified gradually. Malou intensified into a typhoon on the night of 27 October and turned to move north-northeastwards. It reached its peak intensity on the afternoon of 28 October with an estimated maximum sustained wind of 140 km/h near its centre. Malou then weakened gradually and finally evolved into an extratropical cyclone over the seas east of Japan on 29 October.

A tropical depression formed over the southern part of the South China Sea about 280 km east of Nansha on the afternoon of 24 October. It generally moved westwards or northwestwards. The tropical depression reached its peak intensity on the afternoon of 26 October with an estimated maximum sustained wind of 55 km/h near its centre. It degenerated into an area of low pressure over the southern part of Vietnam on 27 October.

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Nyatoh (2121) formed as a tropical depression over the western North Pacific about 450 km northeast of Yap on the night of 29 November. It moved west-northwestwards towards the seas east of the Philippines and intensified gradually. Nyatoh intensified into a severe tropical storm on the morning of 1 December. It then turned gradually to move northeastwards towards the vicinity of Iwo Jima and continued to intensify. Nyatoh further intensified into a super typhoon in the small hours on 3 December and reached its peak intensity with an estimated maximum sustained wind of 185 km/h near its centre. Nyatoh weakened into a severe typhoon that night and finally evolved into an extratropical cyclone over the seas east of Iwo Jima.

Rai (2122) formed as a tropical depression over the western North Pacific about 2 680 km east-southeast of Manila on the night of 12 December. It moved west-northwestwards and intensified gradually. Rai started to intensify rapidly on 15 December and developed into a super typhoon on the next day. After sweeping across the Philippines, Rai weakened into a severe typhoon and moved westwards across the southern part of the South China Sea on 17 December. Rai re-intensified into a super typhoon the next day and became the first super typhoon over the South China Sea in December since 1961. It reached its peak intensity in the small hours on 19 December with an estimated maximum sustained wind of 205 km/h near its centre. Turning to move northeastwards gradually in the following two days, Rai edged closer to the coast of Guangdong and weakened rapidly. It finally degenerated into an area of low pressure over the seas south of Hong Kong on 21 December.

According to press reports, Rai left at least 409 deaths and over 100 000 people evacuated in the Philippines during its passage.

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

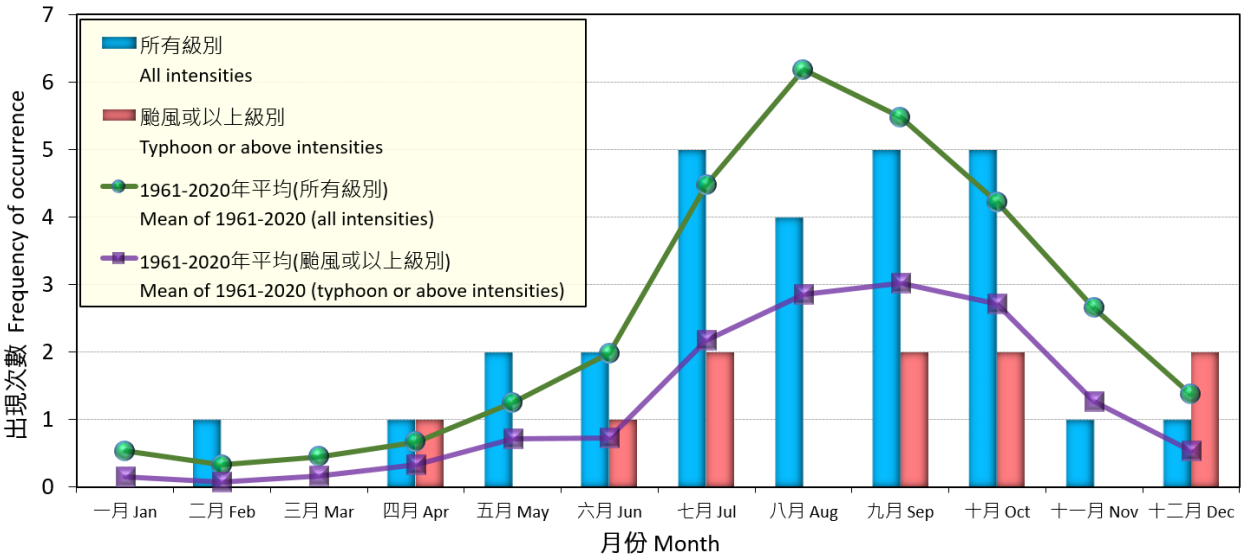

圖 2.1　二零二一年在北太平洋西部及南海區域的熱帶氣旋出現次數之每月分佈 (以熱帶氣旋在該月初次出現為準，假如一熱帶氣旋在九月形成並在十月首次增強為颱風或以上級別，它在「所有級別」及「颱風或以上級別」的統計數字將分別計算在九月及十月份內)。

Figure 2.1　Monthly frequencies of the occurrence of tropical cyclones in the western North Pacific and the South China Sea in 2021 (based on the first occurrence of the tropical cyclone in the month; for example if a tropical cyclone forms in September and first intensifies into typhoon or above intensities in October, its related statistics for “all intensities” and “typhoon or above intensities” will be counted in September and October respectively).

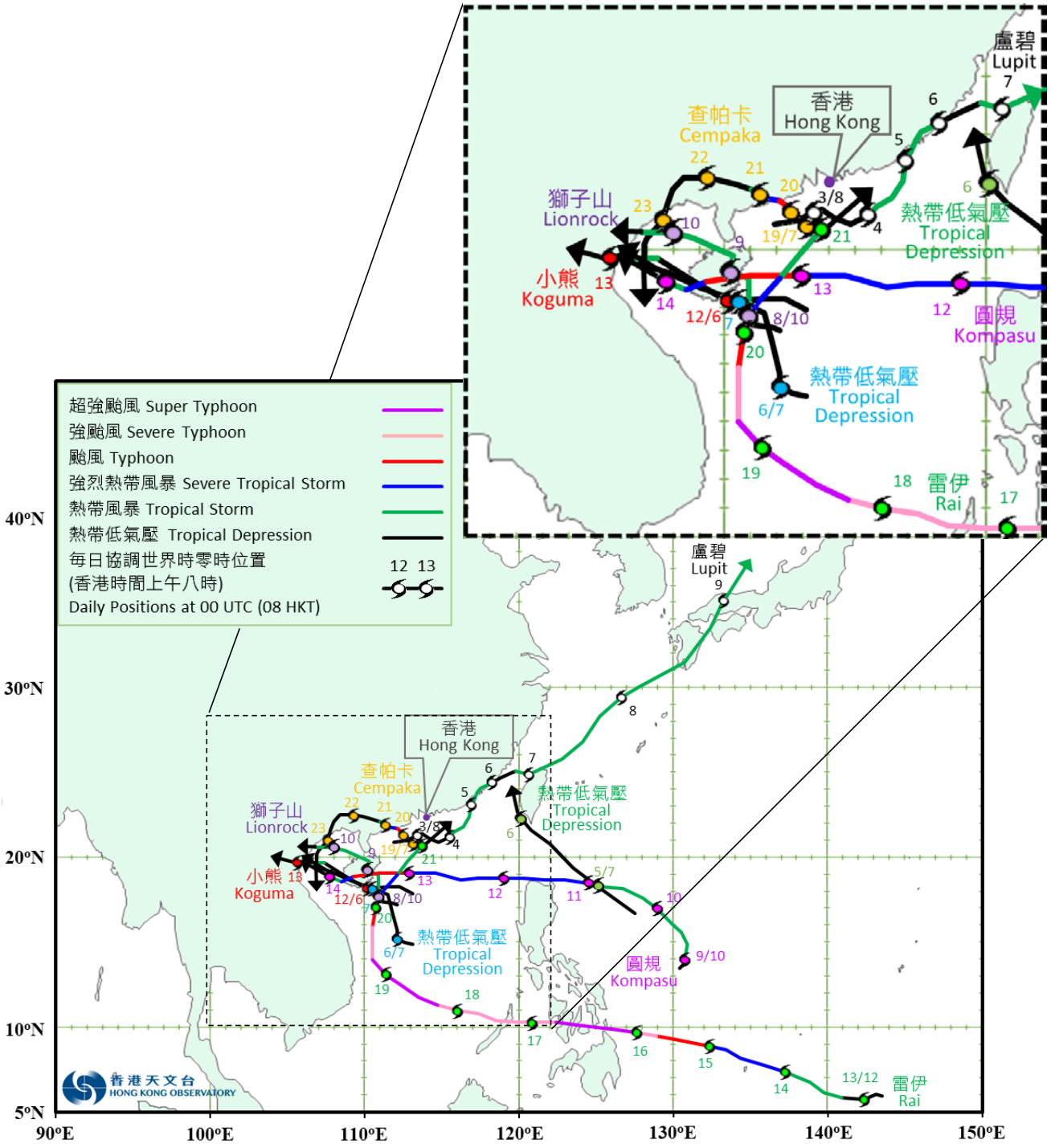

圖 2.2　　二零二一年八個影響香港的熱帶氣旋的路徑圖。

Figure 2.2　Tracks of the eight tropical cyclones affecting Hong Kong in 2021.

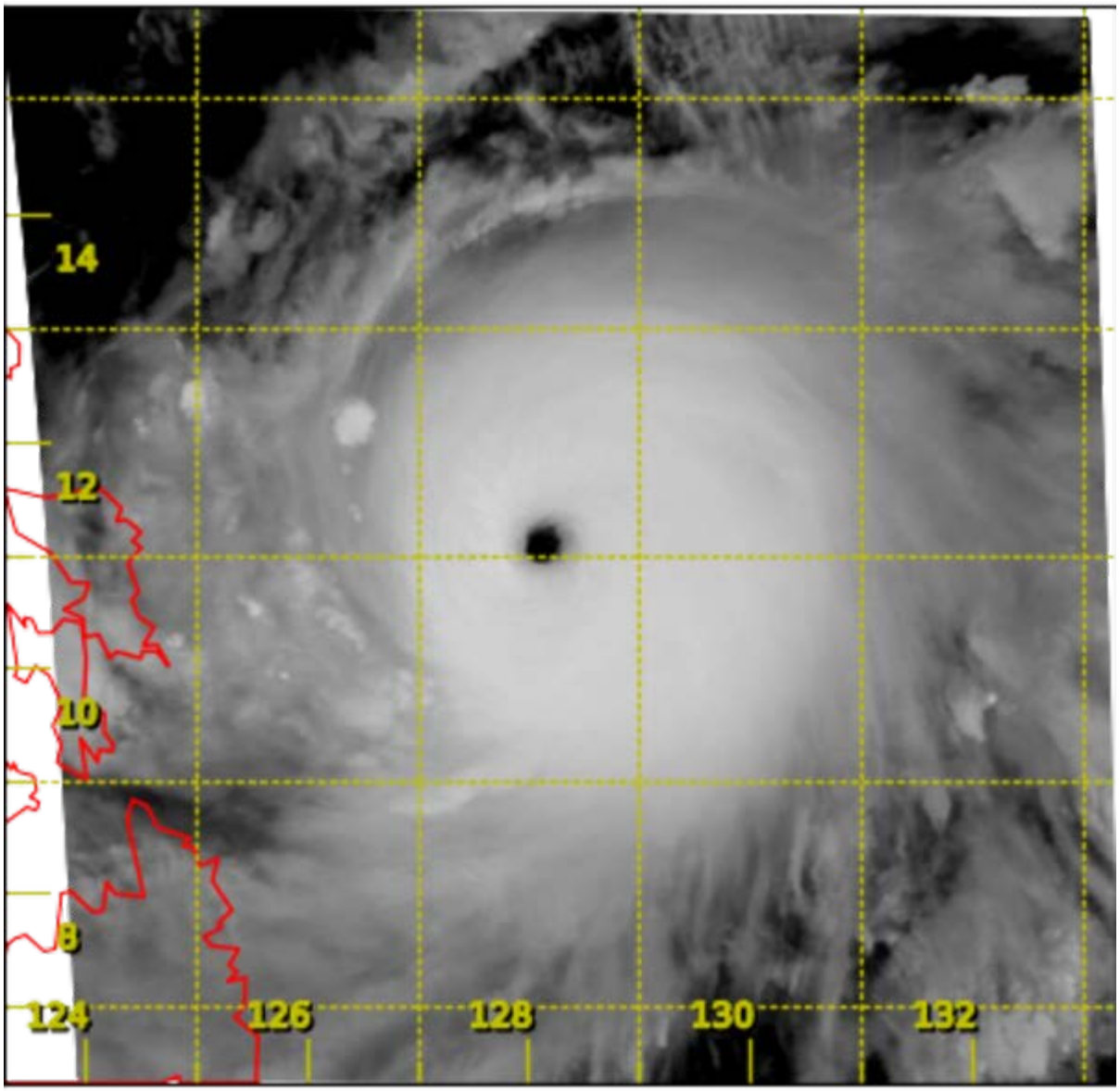

圖2.3a　二零二一年四月十七日下午8時左右超強颱風舒力基(2102)的紅外線衛星圖片，當時舒力基達到其最高強度，中心附近最高持續風速估計為每小時240公里，而最低中心氣壓為910百帕斯卡。

Figure 2.3a　Infra-red satellite imagery of Super Typhoon Surigae (2102) around 8 p.m. on 17 April 2021, when Surigae was at its peak intensity with an estimated maximum sustained wind of 240 km/h near its centre and a minimum sea-level pressure of 910 hPa.

〔此衛星圖像接收自日本氣象廳的向日葵8號衛星。〕

[The satellite imagery was originally captured by Himawari-8 Satellite (H-8) of Japan Meteorological Agency (JMA).]

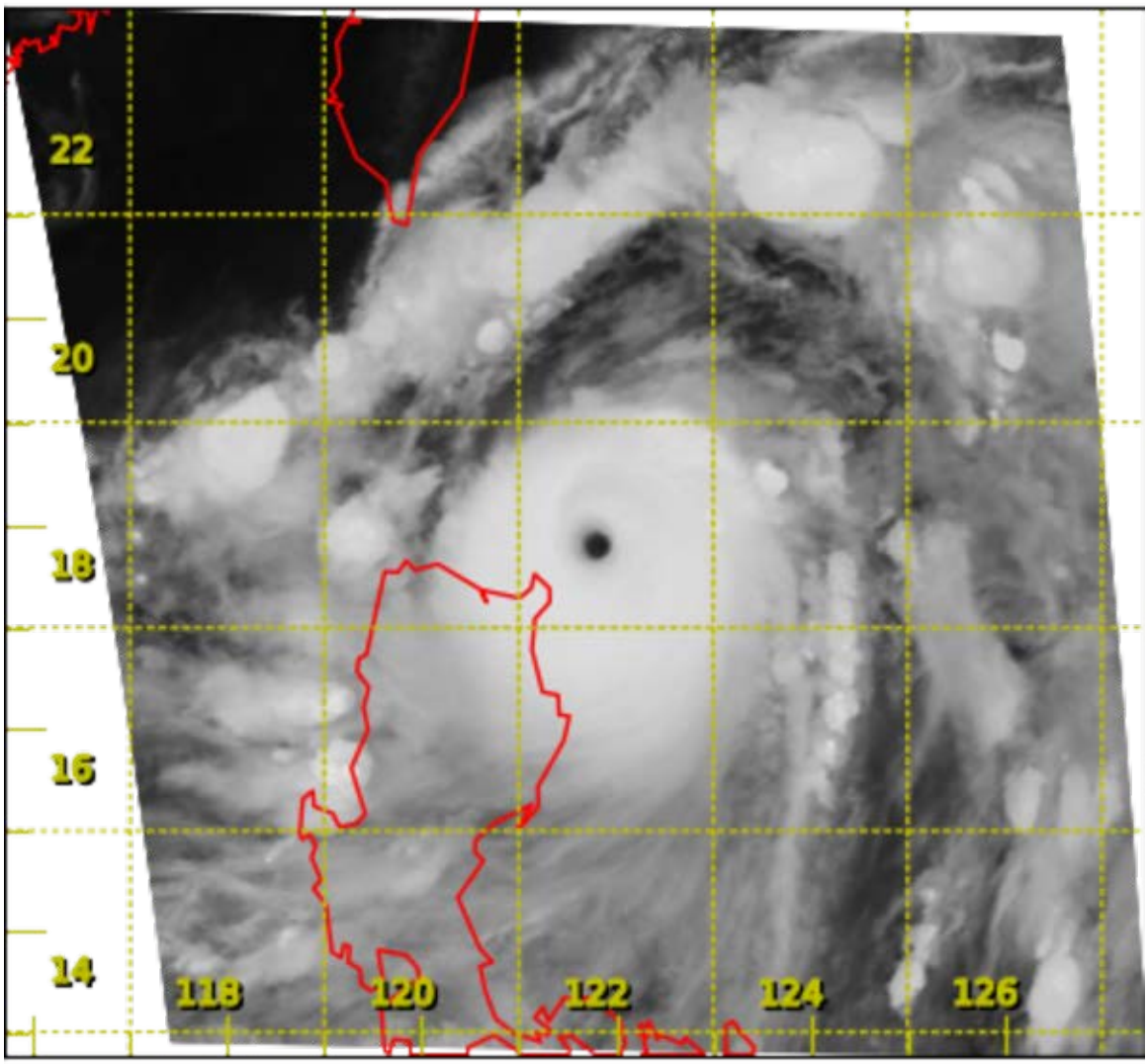

圖2.3b　二零二一年九月十日下午8時左右超強颱風燦都(2114)的紅外線衛星圖片，當時燦都達到其最高強度，中心附近最高持續風速估計為每小時240公里，而最低中心氣壓為910百帕斯卡。

Figure 2.3b Infra-red satellite imagery of Super Typhoon Chanthu (2114) around 8 p.m. on 10 September 2021, when Chanthu was at its peak intensity with an estimated maximum sustained wind of 240 km/h near its centre and a minimum sea-level pressure of 910 hPa.

〔此衛星圖像接收自日本氣象廳的向日葵8號衛星。〕

[The satellite imagery was originally captured by Himawari-8 Satellite (H-8) of Japan Meteorological Agency (JMA).]

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

月份 Month / 年份 Year	一月 Jan	二月 Feb	三月 Mar	四月 Apr	五月 May	六月 Jun	七月 Jul	八月 Aug	九月 Sep	十月 Oct	十一月 Nov	十二月 Dec	共 Total
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
2007							1	4	3	1	3		12
2008				1	2	1	2	3	5	1	2		17
2009					2	2	3	2	3	4	1		17
2010							3	4	2	2			11
2011					2	3	1	2	2	2			12
2012				1		3	2	3	1	2		2	14
2013						2	3	4	4	3	3		19
2014	1					1	2		3		1	2	10
2015	1			1	1	1	2	2	2	2		1	13
2016					1		3	1	4	3	1	2	15
2017	1			1		1	6	3	4	2	3	1	22
2018	1					2	4	4	2	1	2	1	17
2019							3	3	3	1	3	2	15
2020					1	1	2	4	1	4	4	1	18
2021		1		1		2	4	2	3	3		1	17
平均 Average (1961-2020)	0.2	0.0	0.1	0.2	0.8	1.4	2.7	3.1	2.7	2.1	1.7	0.7	15.6

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

月份 Month # / 年份 Year	一月 Jan	二月 Feb	三月 Mar	四月 Apr	五月 May	六月 Jun	七月 Jul	八月 Aug	九月 Sep	十月 Oct	十一月 Nov	十二月 Dec	共 Total
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
2007								1	1				2
2008				1		1		2	1	1			6
2009						2	2	1	3				8
2010							2	1	1	1			5
2011						2	1		1	1			5
2012						2	1	2					5
2013						2	1	2	1		1		7
2014						1	1		2				4
2015						1	1			1			3
2016					1		2	1	2	3			9
2017						1	1	2	2	1			7
2018						1	1	1	2	1			6
2019							2	2	1				5
2020						1	1	1		2			5
2021						1	3	1		2		1	8
平均 Average (1961-2020)	0.0	0.0	0.0	0.1	0.2	0.8	1.5	1.4	1.5	0.9	0.2	0.0	6.0

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.