AN UNUSUAL 'TYPHOON' SEASON

Gentlemen,

Although the season for tropical cyclones for Hong Kong is not yet over, 1987 is likely to be a very unusual year as far as typhoons and their associated rainfall in Hong Kong are concerned.

2. Tropical cyclones, a generic term for what are commonly known to many in Hong Kong, China, and elsewhere as 'TYPHOONS', contribute to about 25% of Hong Kong's annual rainfall. The average yearly rainfall in Hong Kong is 2224.7 millimetres. So, on average, tropical cyclones should bring about 560 millimetres of rainfall.

3. Up to the end of last month, we have already had 2252.5 millimetres which has already exceeded the normal annual rainfall and is about 4% above the average figure for the ten-month period. Yet, of the total rainfall recorded so far, only 6% can be attributed to tropical cyclones. So you may ask, where have all the typhoons gone?

4. Indeed, this year we have had a most unusual 'TYPHOON' season. Although gales due to a typhoon have been known to have occurred in Hong Kong as late as November and the No. 3 Strong Wind Signal went up on December 1 in 1974 when Typhoon IRMA passed right over Hong Kong, I doubt if our present statistics would change much in the course of the remaining one and a half month. The scarcity of typhoons affecting Hong Kong in 1987 will be down as an unusual record and will form an interesting subject of our study.

5. Every year, on average there should be about 30 tropical cyclones in the western North Pacific and the South China Sea and about 12 of them should appear in the South

China Sea. Up to now, the total number in the region is only 22 and only 5 of them affected the South China Sea. In terms of the ones in which we are interested, i.e. those in the South China Sea, there has therefore been less than 50%. And of the 5 which appeared there, one in June, two in August, one in September and one in October, they all came within 800 kilometres of Hong Kong, thereby necessitating the hoisting of the No. 1 Stand By Signal.

6. Please see the map and their tracks.

7. The one in June, RUTH, went to western Guangdong.

8. The two in August, BETTY and CARY, went to Vietnam, Laos and northern Thailand.

9. The one in September, GERALD, landed in Fujian.

10. And the one in October, LYNN, caused the No. 3 Strong Wind Signal to go up. But that was all.

11. The overall result is therefore we all enjoyed a summer relatively free of interruptions from typhoons, although students did complain about the total absence of the unexpected 'Typhoon" holiday.

12. On the other hand, the more positive side ought to be: commerce and industry have lost no working days, races have gone on as scheduled and smoothly without any cancellation or a switch to sand due to wet weather. Share markets continued to flourish with record turnover almost every day, benefitting everyone and of course the government. That is, until Black Monday on October 19!!

13. Has anyone by any chance seen the latest Far East Economic Review where the cover shows a typhoon, as seen by the weather satellite, right over Hong Kong. It says 'STOCKMARKETS HONG KONG, WINDY CITY'. There are interesting articles in it. The articles, however, do not describe weather or typhoon but what happened in Hong Kong on October 19 and afterwards in the financial world and the Hong Kong market. What is depicted here was meteorologically incorrect. Typhoon LYNN, present at the time, did not come close enough, although some people would have preferred that the decision to close the markets for four days during the week from October 20 would have been better taken by Typhoon LYNN. In any case LYNN would at most have closed the markets for 2 days, not 4 days.

14. To explain why we had so few typhoon affecting Hong Kong this year, let me first refer you to this map which indicates the typical tracks of tropical cyclones. Most of the 22 tropical cyclones which occurred this year followed the recurving track, hit Taiwan, eastern China, Korea and Japan. Korea had more than its fair share. There were a couple of very bad ones, Typhoon THELMA in July and Typhoon DINAH in August giving rise to colossal damage in Korea. Japan had one or two bad ones but the number this year was a little less than the yearly average.

15. Hong Kong as you must realise by now got away lightly just because there weren't any intense typhoons following this typical track.

16. What about the number. I did say a few minutes ago that the number in the region was only 22 against an average of 26 for the first ten months. Looking back at the post-war records, 22 is not the lowest number in any

year. In fact, the lowest number was 21 in 1977, and the highest number was 45 in 1961. That is, 45 tropical cyclones of different intensities in the whole of western North Pacific including the South China Sea. And considering the South China Sea alone, the largest number was 20 and occurred in 1964, but in 1976 only 6 occurred. If we are not going to have any more storms in the South China Sea this month and the next, then 1987 will be a record insofar as it has the lowest number of t.c.'s in the South China Sea.

17. Gentlemen, I can of course go on talking more about typhoon statistics, but I think I ought to give you the pleasure of embarrassing the speaker, as I am sure many of you have already thought of difficult questions to ask me.

18. Let me begin by asking this one. Can the Observatory predict the number of typhoons in a year and how many will affect Hong Kong? The answer is an emphatic 'NO', not by anyone in the Observatory, nor for that matter by anyone in the world. Any person can of course make a guess, but I am afraid in the present state of art, the answer will not be scientifically reliable and meaningful.

19. Nevertheless, scientists are working on the problem. As you know, the atmosphere is dynamic, the global circulation is complex and complicated, and the development of tropical cyclones is subject to numerous factors and influences. We believe now that there are tele-connections between one type of weather in one continent or ocean and another, may be completely different, type of weather in another continent or ocean. The drought in the southern Philippines, Indonesia and Australia a few years back, for example, may be linked to the stormy weather in the mid Pacific islands which in turn can be physically explained by the unusual warming up

of the eastern Pacific waters off Ecuador and Peru. El Nino, the name given to this phenomenon of unusual warm sea surface in this part of the Pacific, occurs once every few years. The last El Nino event, one of the most intense ever in history, occurred in 1982-83, and many places in the world experienced most unusual weather conditions.

20. We also believe that we are in an El Nino period and the unusual 'typhoon' season in Hong Kong can at least be partly due to the so called 'El Nino effect'.

21. Thank you, gentlemen, I am now ready for your grilling questions.