SUMMARY RECORD OF THE FOURTH MEETING

Queen Margaret College, Wellington
Wednesday, 29 August 1973 at 2.30 p.m.

CHAIRMAN: Dr C.N. Derek Taylor (New Zealand)

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Fourth Meeting

Wednesday, 29 August 1973 at 2.30 p.m.

PRESENT

I. Representatives of Member States

AUSTRALIA	Dr H.M. Franklands Dr R.W. Cumming Mr R.J. Tyson
CHINA	Dr Chen Hai-feng Mr Chou Shan-yen Professor Shih Chen-hsin Dr Chang Kuang-hua Mr Tsao Yung-lin
FIJI	Dr D. Singh
FRANCE	Dr J. Laigret
JAPAN	Dr Teruhiko Saburi Dr Rintaro Okamoto
KHMER REPUBLIC	Professeur Agrégé Sok Heangsun Dr Kadeva Han Dr My Samedy
LAOS	Dr Phouy Phoutthasak Dr Tiao Jaisvasd Visouthiphong
MALAYSIA	Tan Sri Datuk (Dr) Abdul Majid bin Ismail Dr S.K. Mukherjee Mr Onn bin Kayat
NEW ZEALAND	Dr H.J.H. Hiddlestone Dr C.N. Derek Taylor Dr R. Dickie Professor C.W. Dixon
PHILIPPINES	Dr A.N. Acosta

PORTUGAL	Dr J.B. Duarte Pinheira Dr L. Amarchande
REPUBLIC OF KOREA	Dr Sung Hee Rhee Dr Sung Kyu Ahn Dr Kyong Shik Chang
REPUBLIC OF VIET-NAM	Dr Truong-Minh-Cac Dr Pham-Van Dr Nhan-Trung-Son
SINGAPORE	Dr Ho Guan Lim
UNITED KINGDOM	Dr J.L. Kilgour Dr G. Choa
UNITED STATES OF AMERICA	Dr J.C. King Mr F.S. Cruz Dr M. Kumangai Dr J. Nunn
WESTERN SAMOA	Honourable Seiuli Taulafo Dr J.C. Thieme Mr Faapoituulao Atoa

II. Representative of Associate Member

PAPUA NEW GUINEA	Dr M. Wainetti

III. Representatives of the United Nations and Related Organizations

UNITED NATIONS AND UNITED NATIONS DEVELOPMENT PROGRAMME	Mr W. Hussey

IV. Representatives of Other Intergovernmental Organizations

SOUTH PACIFIC COMMISSION	Dr Anne-Laure Bourre

V. Representatives of Non-Governmental Organizations

INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY	Mr H.V. Brewerton
INTERNATIONAL DENTAL FEDERATION	Brigadier J. Ferris Fuller

INTERNATIONAL COMMITTEE OF CATHOLIC NURSES	Miss P. Dudderidge
INTERNATIONAL COUNCIL OF NURSES	Miss S. Burrell
INTERNATIONAL PLANNED PARENTHOOD FEDERATION	Dr R. Black
INTERNATIONAL SOCIETY OF RADIOLOGY	Dr F.D.T. Harper
WORLD VETERINARY ASSOCIATION	Mr R.C. Watson

VI. WHO Secretariat

DIRECTOR-GENERAL	Dr H.T. Mahler
SECRETARY	Dr Francisco J. Dy

1 QUALITY OF DRINKING WATER ON INTERNATIONAL FLIGHTS (Resolution WPR/RC23.R5): Item 13 of the Agenda (Document WPR/RC24/5)

The REGIONAL DIRECTOR informed the Committee that document WPR/RC24/5 summarized the action taken in connexion with resolution WPR/RC23.R5 adopted by the Regional Committee at its last session. The Committee would note that the resolution had been referred to the Director-General who had called the attention of all Member governments to the need for improving the quality of drinking water and food on international flights and informed them that consultation on appropriate safeguards was taking place at inter-agency level. Representatives might wish to comment on any action taken by their governments to improve the situation.

The CHAIRMAN drew attention to the two papers provided by the Representative of Japan, Table 2 of which was related to the quality of drinking water on aircrafts. It would be recalled that it was the Japanese delegation that had raised this item for discussion last year.

Dr OKAMOTO (Japan) stated that last year his delegation had presented some data on the examination of potable water on international flights obtained during the period 1967-1971. Physiochemical and bacteriological examinations had been carried out to determine the living organisms and materials suspected to be pathogens. Of 180 specimens (56.8%) taken from 317 samples, 143 (45.1%) were considered physiochemically unsatisfactory and 108 (34%) bacteriologically unsatisfactory. Due to the time-lag between service hours on board and examination hours in the laboratory and to the lack of pair-sampling or other epidemiological investigations, a firm conclusion could not be drawn at this stage. However, the inadequate cleaning of containers and tanks or the use of contaminated ice-cubes were concluded to be the main source of contamination. In a few cases, the inappropriate control of water supply points was considered to have been the reason.

In 1972 and during the period January-July of this year, 107 and 48 specimens, respectively, had been examined. In comparison with the data of 1967-1971, a remarkable improvement could not be reported. However, gradual progress might be noted from the data obtained on ammonia, nitrogen and nitrite, nitrogen, or iron. Further attention needed to be given to the provision of good-quality drinking water on board aircraft.

Dr MAJID (Malaysia) said that the Malaysian Airways (MAS) Catering Section, the MAS Engineering Section, the Oasis Canteen and Restaurant, and Qantas supplied drinking water to international flights at Subang Airport, Kuala Lumpur. Recently, the MAS Engineering Section had obtained new water-supply equipment which was similar to that of the Qantas Water Cart. All drinking water was supplied to the aircrafts by the Public Works Department in Selangor and was properly and effectively treated. Effective checks on bacteriological and chemical

analysis, as required by the International Standards for Drinking Water, were maintained. Qantas, the Oasis Canteen and Restaurant, and the MAS Engineering Section drew the water for supply to aircrafts direct from the Public Works Department mains and the Public Works Department took samples from these mains at specified sampling points. Four bacteriological samples and one chemical sample were taken weekly. The Health Department took weekly samples from the MAS Cabin and Catering Services where the water from the mains passed into a storage tank. These samples were taken from a special sampling point in the mains, before entry into the tank, and also from a pipe from the tank which the chemist had seen and approved. Two bacteriological samples were taken per week, two chemical samples per month, one from the special sampling point and the other from the tap coming from the storage tank as directed by the Chemist. The Health Department also took one bacteriological sample weekly of the ice cubes from the cooling plant of MAS.

The results of the chemical and bacteriological examinations had been highly satisfactory. The water supplied by Qantas and the MAS Engineering Services was also treated with chloramine T. The ice cubes supplied by the Oasis Canteen and Restaurant were prepared from boiled water.

His delegation believed that the precautions taken and the chemical and bacteriological examinations carried out within the airport area of the Public Works Department Supply (nearly 364 bacteriological and chemical examinations a year) were adequate safeguards and the results complied with the WHO International Standards for Drinking Water.

The approximate number of people living and working in the airport area was about 2000. Nearly 85 310 international passengers disembarked at the airport and the number of transit passengers was 172 043. In 1972, the number of domestic passengers of Peninsular Malaysia, Sabah and Sarawak was 70 250 and that from Singapore, 199 788. These figures gave an average static population of 2000 and a floating population of 1500 daily in Subang, i.e., about 3500 as a daily average. Since the establishment of the International Airport in Subang eight years ago, the Medical Officers of Health had on no occasion come across communicable or quarantinable diseases, due to water or food, among the international passengers or staff of the airport at Subang, or among the domestic travellers at Subang.

Dr SINGH (Fiji) stated that Fiji, lying at the crossroads of travellers in the South Pacific, had an important part to play in the tourist industry. The large number of international planes landing at the International Airport at Nandi posed a responsibility on the Government to ensure the safety of drinking water for passengers. A programme of checking water at the airport had been in existence for many years. The main supply, which was both filtered and chlorinated, was continuously checked and had been found to be satisfactory at all times. Following the report from Japan, investigations had been

extended to the examination of water tanks, which were found to be satisfactory and, eventually, the examination of the planes themselves and here the results had been rather disappointing. In November 1972, of the 95 water samples taken from containers within aircrafts, 28, or 30%, were found to be infected with B. coli. The culprits were limited to three or four airlines and the matter had been brought to their notice. Remedial measures were taken inside the planes themselves and, in the last two months, the tests of the water carried by the airlines had been satisfactory.

Dr HO (Singapore) said that as part of a continuing programme on airport and aircraft sanitation the Airport Health Office in Singapore had been carrying out regular and spot checks on the water carts used by airline ramp servicing units, although no check had previously been made on the water inside the aircraft water tanks. However, since the outbreak of cholera among passengers who had arrived in Australia, the investigations had been extended to the water supply taken from the aircrafts themselves. The results had been almost the same as those revealed by the Japanese studies and the situation reported earlier by the Representative of Fiji. About one-third to 100% of the water samples from aircrafts had been found to be unsatisfactory. Even the rubber washers and filters in some of the water flasks had been contaminated with bacteria. Ice cubes had been found to be contaminated in quite a number of cases. This was not surprising because some of the water flasks were used for other purposes, i.e., for carrying soup, ice cream, milk, etc.

All the airlines concerned had been informed of the results and advised of the need to take corrective action. It had also been decided to incorporate bacteriological examination of water inside aircraft tanks as a continuing programme. Some improvements have been noted but there were still some deficiencies.

Each authority could enforce its own measures to ensure a safe water supply but one mistake somewhere along the line would ruin the entire supply. The solution seemed to be the extension of the international standards to utensils by introducing standards of sterilization, regular draining of the water supply, cleaning of water tanks, etc., and perhaps by having all supplies taken only from approved suppliers, i.e., those that met the standards which had been set. The servicing teams must be educated on the importance of proper water sanitation practices and the workers should be effectively supervised.

Dr ACOSTA (Philippines) said that the airlines served by the catering service of the Philippine Air Lines were supplied with water and ice which met the international quality standards for drinking water recommended by WHO. Weekly and bi-monthly examinations were made of their water supply. Special containers and water wagons had been constructed and these were washed and maintained in accordance with the WHO Guide on Hygiene and Sanitation in Aviation.

Dr FRANKLANDS (Australia) quoted some investigations carried out in Sydney by the School of Public Health and Tropical Medicine which supported the findings of the tests carried out in Japan and the statements of the other speakers. In these tests, 115 samples of water from aircraft tanks had been examined: 108 of these contained no coliform bacilli but 7 did, in numbers of 1 to 8 per hundred millilitres. The coliform bacilli were not E. coli. In instances, total counts had been carried out and they had been frequently higher than 10 000 per millilitre but as there were no generally accepted standards for total counts in potable waters, these findings were of limited value. Large numbers of coliform bacilli, however, had been found in ice water loaded on to 707 aircraft. This water was held in large metal containers fitted with a tap. It was probable that cleaning between each refill had not been satisfactory. The custom now was to remove the taps from these containers and thoroughly clean them before each refill. In addition, the general water tanks on 707 and 747 aircraft run by Australian companies were now being drained and rinsed with hyperchlorite solution after every 25 000 miles - in other words, each time they returned to Australia from a trip to London.

There being no further comments, the CHAIRMAN requested the Rapporteurs to prepare an appropriate resolution. (For consideration of draft resolution, see the fifth meeting, section 2.5.)

2 QUALITY OF FOOD ON INTERNATIONAL FLIGHTS (Resolution WPR/RC23.R12): Item 16 of the Agenda (Document WPR/RC24/8 Rev.1)

The REGIONAL DIRECTOR informed the Committee that document WPR/RC24/8 Rev.1 summarized the action taken in connexion with resolution WPR/RC23.R12 which had been adopted by the Regional Committee at its last session. As requested, information had been obtained from Member countries on (a) the safeguards currently in effect to control the sanitary quality of food served on international flights and (b) studies done in Member countries to assess the risk of food-borne diseases on international flights.

A summary of the information received from eleven countries and nine territories was attached to the document under consideration. Representatives would note that the health agencies in the Region played an effective role in the protection of the health of international air travellers. Nevertheless, in several instances improvements in the systems of inspection and control were required. As few attempts had been made in the Region to assess the risk of food-borne diseases from international flights, it was hoped that some countries might be interested in undertaking such studies. The wider use of the WHO Guide to Hygiene and Sanitation in Aviation was also recommended.

Dr FRANKLANDS (Australia) said that, as reported on page 32 of the Regional Director's report, there had been in November 1972 an

outbreak of cholera in Australia. The forty-one cases reported had all been from passengers on one international flight and the source of the disease had been traced to cold hors d'oeuvres, served at one meal in-flight. Some 357 passengers had been potentially at risk and there might have been other unrecognized cases as about 40 had left the plane at an intermediatary stop after the meal. Two passengers who had so disembarked had arrived in Australia later on another aircraft and had been found to have cholera. A number of passengers had travelled on to New Zealand and had also developed cholera; one of these had later died. The same meal had been loaded on to another aircraft travelling to London and on arrival it was found that some passengers had developed cholera. This illustrated the potential for the gross spread of disease that a breakdown of hygiene in the preparation of one item in a meal can have on a captive audience. It also indicated the need for more comprehensive standards in the selection, preparation and storage of food for international flights. Tests had since been carried out at the School of Public Health and Tropical Medicine on the microbiological quality of randomly selected airline meals. There were no generally accepted microbiological standards for airline meals but it was generally agreed that pre-cooked, frozen meals should conform to certain standards. For instance plate counts at 30 degrees centigrade should contain less than 10^5 organisms per gram, Staphylococcus aureus coagulase-positive should be less than 100 organisms per gram and coli organisms less than 10 per gram. If these standards were applied, a large number of the meals examined would have been unsatisfactory. The findings were only preliminary, however it was considered that special health risks existed with cream, stuffed or chopped egg, milk, in some circumstances, and cold sea-foods. These foods were commonly provided on aircraft but should be avoided unless strict quality control were assured. It also applied to most cold meats where insufficient refrigeration was available. A series of left-over airline meals had also been examined. This food had been taken from the aircraft on arrival in Sydney and had not been refrigerated during the latter half of the inward flight. It had a higher bacteriological count than that kept under refrigeration. Studies were being carried out at the University of New South Wales on the stability of airline meals under different storage conditions. The findings to date indicated that for precooked meals, meat and poultry with vegetables, the approximate storage time before spoilage, detected by taste, odour and microbiological counts were, storage at 3 to 6°C - 3 days, at 20°C - 12 hours and at 30 - 40°C - 5 hours. These again indicated the need for refrigeration of aircraft meals before and after loading, particularly in tropical areas where high ambient temperatures are common. The standards which should be used for aircraft meal preparation should be specified in specific terms, should come from an authoritative source and be able to be universally applied by all countries which have this particular responsibility.

Dr Franklands then proposed a resolution, a copy of which was handed to the Chairman for consideration of the Committee.

The CHAIRMAN suggested that as it was a long resolution it should be the basis for further discussion tomorrow to obtain the feeling of the Committee.

Dr KING (United States of America) endorsed the concern already expressed on the quality of food on international flights. This region had taken the initiative in demonstrating the extent of the problem but it was appropriate that it be referred to the Executive Board of the World Health Organization.

Dr KILGOUR (United Kingdom) agreed with the proposal put forward which followed the paper presented by the delegation of Japan last year. However, the problem being a global one should certainly be referred to the World Health Assembly.

Dr OKAMOTO (Japan) said that as predicted there had been an increase in the number of cases of contamination of airlines foodstuffs causing illness and re-emphasized the resolution adopted at the twenty-third session of the Committee. As a result of a brief trial survey, before the commencement of regular examination procedures, some data, although not sufficient to reach any definite conclusions, had been obtained. The examination of 149 specimens taken from 11 planes which had arrived at Tokyo International Airport during January and February 1973, had revealed pathogens of food poisoning in milk, cakes, hors d'oeuvres, sliced ham and sausage. As the specimens had not been taken until several hours after the food had been served on the aircraft the results did not necessarily indicate the level of contamination at the time of service. Although no cholera pathogens had been found, there had been concentrations of coliforms and staphylococcus. The contamination of the food was attributed to a lack of hygiene among members of the catering staff and crew members during preparation, storage, and handling before and after loading. The data obtained, although insufficient to describe the whole situation of food sanitation on international flights, did show the trend of food contamination. It also showed that such services should be far more strictly controlled by domestic and port health authorities. Certain airlines insisted that pilots and co-pilots be provided with a different menu and different hours to avoid accidents caused by the occurrence of food poisoning, and the health of passengers deserved similar protection.

Dr CHANG (China) said that the airport quarantine service in his country was relatively new and therefore he would appreciate learning from friends in the other countries present.

Firstly, he would emphasize that the quality of food supplied by the airlines was of major importance. It must be both sanitary and tasty but this posed difficulties in that the speed and altitude of air travel made it necessary to prepare food on the ground and to keep it in cold storage on planes. In addition, Chinese airlines carried sweets, spirits, mineral water, orange juice, water, ice-cream and

fruit, all of which had to be inspected beforehand. The quality of the food must be guaranteed. It must be fresh, clean and cooked well. Special care must be taken to ensure that raw food was kept separate from that already cooked. The latter must be sealed tightly and kept under cool storage.

The personal hygiene rules for food handlers must be strictly observed. In addition, all those handling food should have a complete medical examination every six months, to ensure freedom from gastro-intestinal diseases and such conditions as virus hepatitis, active tuberculosis and purulent dermatosis. Persons found suffering from disease should be immediately removed and not allowed to return to work until cleared by medical officers. Strict disinfection was essential. Drinking water, like food, was vital to the health of passengers and must meet international standards. Chinese Airlines provide drinking water which had been boiled and sterilized.

The REGIONAL DIRECTOR thanked the Representative of Japan for the information provided which contained significant findings. He asked whether WHO could be provided with a complete report on the studies made, including the procedures followed.

Dr OKAMOTO (Japan) agreed to send a complete report to the Regional Office as soon as this was available.

Dr KING (United States of America) asked whether the results of the tests carried out in Singapore and Fiji could also be sent to the Regional Office.

The Representatives of Australia, Singapore and Fiji agreed to do this.

As there were no further comments, the CHAIRMAN suggested that as this item had been the subject of a resolution, further discussion could be left until the resolution came before the Committee.

It was so agreed. (For consideration of draft resolution, see the fifth meeting, section 2.6, and the sixth meeting, section 2.1.)

3 DISINSECTION OF AIRCRAFT (Resolution WPR/RC23.R7): Item 14 of the Agenda (Document WPR/RC24/6)

The REGIONAL DIRECTOR stated that document WPR/RC24/6 summarized the action taken in connexion with resolution WPR/RC23.R7 adopted by the Regional Committee at its last session.

The Committee would note that the joint report of ICAO and WHO on the vapour disinsection system had not been ready by the time the Twenty-sixth World Health Assembly had met. There was, therefore,

no further information to report on this matter. However, new aerosol formulations for aircraft disinsection had been approved by the Twenty-sixth World Health Assembly and would, in due course, be included in Annex VI of the International Health Regulations, 1971.

If the Twenty-seventh World Health Assembly considered the joint ICAO and WHO report, this item would be placed again on the agenda of the twenty-fifth session of the Regional Committee.

Dr OKAMOTO (Japan) said that with the advent of larger and faster international aircraft, the introduction of vermin from abroad was becoming a growing problem. The Japanese delegation would like to express its appreciation of the work of WHO in this field, especially in the development of a non-toxic vapour method, new formulas for disinsectant, etc.

Japan was experimenting with gambusia or tilapia (the natural enemies of mosquitos) on and around airports, especially in the sewage system and paddy fields. In some areas the breeding areas of mosquitos had been eliminated by the introduction of these fish. A study to find a new disinsectant only mildly toxic to fish was also in progress.

Dr MAJID (Malaysia) said that the Malaysian Ministry of Health had advised the agents of all international aircraft using Subang Airport, that from 1 July 1973 such aircraft would have to be disinsected by the "blocks away" method. However, only 50% of the International Airlines had so far complied with this directive. Efforts were continuing to ensure that all aircraft complied with this instruction.

There being no further comments, the CHAIRMAN asked the Rapporteurs to prepare an appropriate resolution. (For consideration of draft resolution, see the fifth meeting, section 2.4.)

The meeting rose at 4.10 p.m.