



**ILO**

## **ILO Meeting of Experts on Problems concerning Air Traffic Controllers**

**Geneva, 8-16 May 1979 – REPORT**

### **MANUAL**

IFATCA is the recognised international organisation representing air traffic controller associations. It is a non-political, not-for-profit, professional body that has been representing air traffic controllers for more than 50 years, and has more than 50,000 members in over 120 countries.

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### Document Change Summary

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# International Labour Organisation

## MEETING OF EXPERTS ON PROBLEMS CONCERNING AIR TRAFFIC CONTROLLERS (Geneva, 8-16 May 1979)

### REPORT

1. In accordance with the decisions taken by the Governing Body of the International Labour Office at its 201st Session (November 1976) on the recommendation of the Preparatory Meeting for Civil Aviation (Geneva, 3-10 October 1974), a Meeting of Experts on Problems concerning Air Traffic Controllers took place at the ILO headquarters, Geneva from 8 to 16 May 1979. It held 14 sittings.
2. The Meeting was composed of 30 experts, 15 of whom were appointed on the proposal of governments after appropriate consultations, and 15 after consultation with the Workers' group of the Governing Body. It was understood that the government of any country where air traffic control services were run by private bodies would be asked to invite these bodies to nominate the expert. Out of the 30 experts, 29 attended the Meeting. Some of the experts were accompanied by personal advisers. The Meeting was also attended by observers from the International Confederation of Free Trade Unions; the International Federation of Air Line Pilots' Associations; the International Federation of Air Traffic Controllers' Associations; the International Federation of Air Traffic Safety Electronic Associations; the International Federation of Trade Unions of Transport Workers; the International Organisation of Employers; the International Transport Workers' Federation; the Public Services International; the Trade Unions International of Transport Workers; the World Confederation of Labour; and the World Federation of Trade Unions. A list of the participants will be found in Appendix II.
3. The representative of the Director-General of the ILO was Mr. Jean Reynaud, Chief of the Industrial Sectors Branch, and the Executive Secretary was Mr. A. Gil of the same branch.

#### **Terms of reference**

4. At its 208th Session, the Governing Body decided that the agenda of the Meeting would consist of a single item, namely "Problems concerning air traffic controllers: identification and possible solutions".

## Opening of the Meeting

5. The representative of the Director-General (Mr. J. Reynaud) opened the proceedings and welcomed the experts and other participants on behalf of the Director-General of the ILO. He pointed out that air traffic control nowadays played a vital part in the orderly operation and development of air transport. The enormous technological advances in air navigation, radar and data processing enabled modern air traffic control systems to handle a considerable and growing number of aircraft. They had also drastically modified the functions and the working environment of the air traffic controller, who now assumed wider responsibilities. However, concurrently with such progress, many professional and human problems highlighted by certain recent events had arisen in the air traffic control systems of many developing and developed countries, drawing world-wide concern to the problems of air traffic controllers. The ILO's unique structure, expertise and experience of social and labour issues at the international level could make an important contribution to the work already accomplished in this area.
6. Mr. P.V. Dawson, Director of Employee Relations, Transport Canada, Ottawa, Canada, and Mr. G. Kandasamy, General Secretary, Amalgamated Union of Public Employees, Singapore were elected unanimously as Chairman and Vice-Chairman of the Meeting, respectively.

## General introduction

7. The representative of the Director-General emphasised that future ILO activities in air traffic control should be orientated by people who knew and experienced these problems and would be directly concerned with their solution. The Governing Body of the ILO and the Director-General looked to the experts for authoritative opinions, ideas and concrete proposals on what the ILO should do. The Meeting was expected to identify the problems concerning air traffic controllers and propose possible solutions to them. In order to assist the experts in this complex task, the Office had prepared and circulated a working document. While admitting that the information therein was incomplete, especially as regarded statistics and comparative analyses, he hoped that the Meeting would nevertheless find it useful, if only as a basis for an exchange of views and information. The results of its work, possibly in the form of a report and a set of conclusions embodying points of agreement, would be submitted to the Governing Body and, among other purposes, lay the basis for future ILO action.
8. The Meeting agreed to tackle its programme of work on the basis of the points for discussion suggested in the working document prepared by the Office, in the order reflected in this report.
9. The International Civil Aviation Organization (ICAO) provided the Office with comments on the working document covering the technical and operational aspects of ATC. These comments were distributed to the Meeting for information.

10. The Worker experts felt the Meeting was a welcome opportunity to present and discuss some of the controllers' problems. They stressed the importance of sound, democratic procedures which would enable organisations representing air traffic controllers (ATCOs) to participate in the determination of all aspects of their working lives and conditions. The principles embodied in ILO Conventions Nos. 87, 98 and 151 constituted the basic rights of workers, from which ATCOs should not be excluded. They were concerned with deficiencies concerning industrial relations and social and labour aspects of the ATC systems, as the ATCO's profession had not yet been duly recognised in civil aviation. Long working hours, overtime and continuous shift work affected air safety. In view of the peculiarity of their profession, ATCOs should enjoy a lower age of retirement with pensions comparable with those of other workers at normal retirement age. Remuneration should be commensurate with the ATCO's responsibility, which should be related to that of airline pilots. Co-operation should be established on occupational safety, health and welfare between organisations representing ATCOs and the ATC authorities. The ILO should investigate health and stress hazards among ATCOs. Legal liability was essentially of an international nature and should be solved by an international agreement.
11. A Worker expert commended the Governing Body of the ILO for having convened the Meeting. Air safety and staff interests were being sacrificed to purely economic considerations as investment in ATC was insufficient while air traffic volume was growing. The conditions of work and life of ATCOs were therefore deteriorating and concern about their future resulted in serious nervous strain. Their trade union rights had been violated and decisions were taken without their being consulted, except through joint committees which only had an advisory role. In view of the importance of these problems and their international character, the Meeting should put forward a proposal for the drawing up of an international instrument.
12. The observer of the International Transport Workers' Federation (ITF) pointed out that the frequent industrial disputes, go-slows and strikes indicated that labour- management relations in this field were far from satisfactory. In many countries ATCOs enjoyed no trade union rights, and in others they were victimised for engaging in trade union activities. The ATCO's profession and status had not yet obtained the international attention these deserved in view of his role and responsibilities. His conditions of work were deteriorating both professionally and socially. The safety aspects related to the ATCO's responsibility and profession were comparable to other professions in civil aviation, but no international guidelines existed to regulate the ATCO's hours of work, and his remuneration was totally unrelated to his responsibilities. Safety should not be compromised for financial reasons and budgetary restraints which were the root of world-wide staff shortages, the use of out-of-date equipment and low remuneration of ATCOs.
13. The observer of the International Federation of Air Traffic Controllers' Associations (IFATCA) was grateful to the ILO for convening this Meeting. Air navigation safety could not be ensured without taking account of the important human and social factors relating to the status, working environment and conditions of work of ATCOs. Present international regulations for ATC procedures took no account of human factors essential to safety such as workload, hours of work, rest periods, retirement age, remuneration and training. He hoped that the Meeting would take the first step towards international standardisation of the human and social conditions in ATC.

14. The observer of the International Federation of Air Traffic Safety Electronic Associations (IFATSEA) said that his organisation fully recognised the urgent need to discuss and solve the problems concerning ATCOs, especially the need to ensure that they were provided with all the necessary equipment to maintain the safety of the travelling public.
15. The observer of the Trade Unions International of Transport Workers pointed out that his organisation had studied the situation of ATCOs through surveys, and found that their status and conditions of service varied greatly from country to country. He felt that the type of ATC administration and the ATCOs' status should not preclude them from enjoying the rights embodied in Conventions Nos. 87 and 98, and from having the right to strike. All other conditions of work such as hours of work, remuneration, retirement age and pensions, training, manpower and career planning should be adapted to the specific demands of ATC work within the civil aviation framework, and form the subject of international instruments.
16. The observer of the Public Services International stated that his organisation attached great importance to the Meeting and had closely collaborated with the ITF in preparing for it. He looked forward to its successful outcome as a further step towards the full recognition of trade union rights of public servants all over the world.
17. The Government expert from the USSR made available to the participants information on air traffic controllers in the USSR.

## Discussion

### Industrial relations

18. The Worker experts felt that the right to establish and join associations of the ATCO's own choosing was of fundamental importance and should be recognised everywhere. ATCOs should be able not only to join associations of their own choosing, but as a professional body establish their own professional association or trade union without having to belong to a conglomerate one, and without interference from public authorities or their employer. However, in many countries, especially where ATCOs were assimilated to military personnel, this right was not recognised. It was essential that ATCOs should, as a professional group, be free to establish and join an organisation representing ATCOs.
19. The Worker experts felt that participation by ATCOs in procedures for determining their physical and professional working environment and their general terms and conditions of employment was a logical follow-up to the right of association, and that ATCOs should be able to participate in all decisions relating to their physical and professional working environment and their general terms and conditions of employment. Such consultation and participation should take place at the early stages of the planning or decision-making process, and the ATCOs' views should be taken into account. The principles embodied in the relevant provisions of Conventions Nos. 87 and 98 should be incorporated into the conclusions. Participation had also to cover the technical aspects of the ATC system.

20. A Government expert pointed out that workers' participation varied from country to country and that the determination of particular conditions of employment was a matter of negotiations at the national level between the employers and the trade unions. In the Federal Republic of Germany there were extensive provisions for worker participation in decision making.
21. As regards the frequency and causes of industrial disputes the Worker experts felt that disputes usually arose when the employer did not use the machinery provided for in the Conventions Nos. 87, 98 and 151. Lack of proper recognition of the profession, poor quality equipment and working conditions, and the absence of an adequate dispute settlement machinery also caused disputes. Lack of the right to strike prevented the ATCOs from effectively negotiating their conditions of employment and governments tended to take advantage of that. In countries where these problems were solved satisfactorily, there were practically no major industrial disputes. Disputes were also linked to the lack of ATC capacity for handling a growing volume of air traffic which caused overload and ATCO discontent. A major cause for disputes was that governments and employers did not take the ATCOs' views seriously unless ATCOs took action.
22. A Government expert felt that lack of contacts between management and ATCOs caused a breakdown in communication and therefore disputes. Having a similar educational background and career aims and prospects, the air traffic safety electronics in France were, on the whole, less prone to resort to industrial action because management had more frequent contacts with them, probably because they were not subject to shift work.
23. On behalf of a Worker expert it was pointed out that electronic technicians were involved in many recent disputes, and their contacts with management were informal and limited to the lower echelons. No comparison was possible between the two professions, and the causes of disputes lay in poor working conditions, understaffing, overload, low remuneration, etc.
24. The Government expert from the Federal Republic of Germany felt that unrealistic demands by ATCOs were also causes of disputes, for instance when in his country in 1973 they demanded to have their salaries based on those of private airline pilots.
25. The Worker experts pointed out that the comparison of ATCOs with the wrong professions and their being placed in the wrong organisational and administrative structure contributed to disputes. ATCOs were not unrealistic in wishing to be compared to airline pilots, since in New Zealand an independent judicial body had already reached such a conclusion. As professional and operational people, they should certainly not be compared with civil servants. Furthermore, pay disparities were major causes for disputes in several African States where ATC was provided by semi-state agencies such as the Air Navigation Security Agency (ASECNA). Nationally recruited ATCOs in some of those States were paid only a third of what an expatriate ATCO received. It was also pointed out that status was not the real cause of disputes, and that comparison with other professions would not solve the basic problem of letting all workers and civil servants enjoy trade union rights and negotiate their conditions of employment.

26. With regard to settlement of disputes, the Worker experts proposed that the proposed conclusions should include the principles embodied in Conventions Nos. 87, 98 and 151. ATCOs should not be excluded from their scope, since by doing so, one merely increased the number of illegal strikes or industrial actions, and turned disputes into long and bitter conflicts. Sound dispute settlement machinery was essential for preventing disputes.
27. The Government expert from the Federal Republic of Germany pointed out that in his country the conditions of work, remuneration and dispute settlement procedures for ATCOs, as public servants, were subject to parliamentary law, and as regards Article 8 of Convention No. 151 concerning dispute settlement procedures, the parliament had to take into account the special constitutional situation in the Federal Republic of Germany.
28. With regard to industrial action the Worker experts recognised that strikes were detrimental to the operations and safety of civil aviation, but felt that the right to strike should be included within the dispute settlement machinery to make it more effective and to prevent long and drawn-out illegal strikes more easily. It did not mean that strikes would be resorted to lightly. Under no circumstances should unqualified personnel be substituted for ATCOs because air navigation safety could not be maintained.
29. A Government expert stated that in France, the right to strike had been withdrawn for the controllers after repeated strikes which had disorganised ATC services. He therefore wondered whether the restoration of the right to strike would offer any advantage over the present situation. Furthermore, in many developing and developed countries the right to strike was constitutionally established, but ATCOs were excluded from having access to it because of the serious consequences of strikes in ATC on the economy and on public life.
30. At the request of the Chairman, Mr. Gernigon of the ILO Freedom of Association Branch explained that the Committee on Freedom of Association of the Governing Body of the ILO has considered that the right to strike was one of the essential means through which workers' organisations may promote their occupational interest. Nevertheless, the Committee has agreed that the right to strike could be restricted or even prohibited in the civil service or in essential services because a strike there could cause serious hardship to the national community. Such a restriction should be accompanied by adequate, impartial and speedy mediation, conciliation and arbitration procedures.
31. A Government expert said that in Canada ATCOs had the right to strike only in specific circumstances and after the legal dispute settlement machinery was fully exhausted. Prior to negotiation each bargaining agent chose between compulsory arbitration, precluding the recourse to strike, and mediation and conciliation which included it. Where bargaining units select the conciliation method of dispute settlement, efficient arrangements for essential service must be ensured through a process of designation of employees required to perform specific essential duties in the event of a strike prior to the establishment of a conciliation board. If negotiations failed a tripartite conciliation board would be established which would attempt to bring about a negotiated agreement. On those issues where agreement cannot be reached, the conciliation board, within specified time limits, makes recommendations to the Public Services Staff Relations Board. Seven days after these recommendations were made the right to strike was available for ATCOs.

32. The Worker experts thought the Canadian system was a desirable example to follow. ATC, however, could not be termed an essential service as a means of precluding ATCOs from the right to strike. ATC was not an essential service since other means of transport apart from air transport were available if ATCOs went on strike. The civil servant status of ATCOs should also not be invoked as a means to deprive them of this right.
33. Some Government experts were opposed to that view and felt that ATC was a vital service and therefore the right to strike should not be recognised for ATCOs. They also felt that a reference to national conditions was essential in view of the importance attached in some countries to air transport. Unlike Europe which had an efficient railway network capable of ensuring transport in case of ATCO strike, many developing countries and other States relied on civil aviation as a vital means of communication. A Government expert indicated that ATCOs in Japan, as civil servants, were precluded from the right to strike by legislation.
34. The observer of the International Organisation of Employers stated that any right to strike must entail a corresponding right to lock out. However, governments were not free to exercise the right of lockout since air traffic control was an essential service. In any case, there could be no absolute right to strike, and none of the relevant ILO Conventions mentioned the right of strike.
35. A Worker expert pointed out that in many countries in Latin America and to a lesser extent in Europe, ATCOs were assimilated to or under the military, and had no right to strike. Some countries had no regard for basic human rights at all and no workers were allowed to strike. ATCOs were preoccupied with air safety and wanted the right to strike as a last resort to ensure and demonstrate the need for a high level of safety.
36. The observer of the International Federation of Air Line Pilots Associations supported all efforts to improve safety. ATCOs were essential to safety, but also to the economy and regularity of air traffic services. Governments should recognise the requirements of ATCOs and meet them.

### **Social and labour aspects of the ATC systems**

37. With regard to technological and organisational factors associated with safe and efficient ATC performance, the Government experts felt that ICAO was perhaps a better forum to discuss flow control and capacity problems, except for their social and labour aspects.
38. The Worker experts stressed that temporary flow control measures imposed by ATCOs during peak traffic periods for reasons of safety were often interpreted by the mass media as industrial action. Insufficient investment in ATC equipment had made the system incapable of coping with the yearly increases in air traffic. The ILO should investigate this problem, since growing demand for air traffic and chronic lack of ATC capacity have an impact on conditions of service, and put the ATCO under strain. Although ATCOs implemented flow control on occasion for safety reasons, ICAO had recognised that industrial disputes are one of the causes of flow control measures.

39. The observer of IFATSEA underlined his organisation's support for the ATCOs' claims for reliable equipment, and felt that the ILO should draw ICAO's attention to the need for establishing international standards for the maintenance and design of ATC premises and ground equipment.
40. As regards the ATCO's functions and workload, the Government experts stressed that the findings referred to in the working document were only indicative and could not be taken as definitive limits on the ATCO's workload. The findings varied from country to country, and often reflected the particular conditions prevailing at the time of the study. No outright comparison among countries was possible, and even within a country, account had to be taken of differences among regions or even sectors. Each country should conduct research into this problem. However, States having similar ATC systems and conditions might benefit from an exchange of information.
41. The Worker experts agreed that the findings were not definitive, but they could offer some basic models for planning hours of work, preventing overload and planning the traffic to maintain an orderly flow when an ATC facility might cease operations. They proposed that these studies be forwarded to the ILO for dissemination.
42. With regard to the type of ATC administration and the basic employment status of the ATCO, several Government experts felt that ensuring air safety was a matter for the State and ATC had to operate under the government, with ATCOs as civil servants.
43. Several Worker experts favoured the semi-private or private ATC company as best suited to deal with the social and labour aspects of ATC, and even the technical aspects. Regardless of the type of administration and structure they felt that ATC should not be provided by military units because military and civilian ATC operated with different specifications, military and civil ATCOs received different training, the latter undergoing a much longer training programme, and were thus not easily interchangeable, if at all. The military ATC system was also unsuitable since generally remuneration was lower and the promotion system conducive to a high turnover of staff, often at a point in their career when their proficiency was at or near its highest. Other Worker experts attached little importance to the existing structure so long as it was civilian, well-defined and capable of managing the social and labour problems of ATC.

## Hours of work

44. A Worker expert said that in the USSR following a 1979 study of a research institute, which had focused on psychosomatic elements influencing working capacity, shifts were shortened and ATCOs were currently working shifts of 7 hours by day and 10 hours by night, on a 37-hour week, which could in certain cases be prolonged to 41 hours. There was an interval of at least 24 hours between two shifts. In the interest of safety, no overtime was allowed.
45. A Government expert wished to specify that the hours of work in Kenya given in the working document reflected a very temporary measure which became necessary when the aviation authority of the East African Community was dissolved. Currently ATCOs were working no more than 35 hours a week, and no overtime.

46. Several Worker experts felt that in the interest of safety duty hours for ATCOs should be essentially shorter than those of office workers, as was the case for flying and cabin crews. They proposed the following limits: a maximum (including meal breaks) of 32 hours per week and 7 1/2 hours per shift, at least 30 minutes break after a 2-hour period at a control position; and an interval of at least 12 hours between shifts. A study carried out in Switzerland in 1968 had recommended an average of 37 hours a week, broken into a weekly timetable of 34 hours and 24 minutes during daytime, and a weekly timetable of 50 hours during night-time, the latter being repeated once every 6 weeks. The desirable average recommended for each shift was 8 hours as the absolute maximum, 7 1/2 hours by day and 10 hours by night. It was not the only study of its kind.
47. A Worker expert proposed that the Meeting should not go into details but only lay down the basic principles of maximum hours of work per week and the limit of two hours uninterrupted working time on a control position. ATCOs were sufficiently responsible to arrange their own shifts within those limits.
48. Another Worker expert felt that maximum and minimum limits were essential for manpower planning, but that they should be somewhat flexible to permit adaptation to local conditions.
49. Several Government experts wondered whether the study mentioned could be applied indiscriminately in all countries. The Government expert from India said that in his country the workload of the ATCO was not uniform as some airports handled only one or two flights a day. He pointed out that in India; ATCOs worked a 12-hour night shift because of local problems.
50. Several Government experts requested an explanation on how the figures proposed by the Worker experts had been determined. In some countries such as the Federal Republic of Germany, meal breaks and rest periods were calculated at 8 hours a week, and if the 32 hours limit were adopted, ATCOs would work effectively only 22-25 hours per week. These breaks were taken into consideration in determining manning requirements. In the United Kingdom, Civil Aviation Authority ATCOs are scheduled (conditioned) for 41 hours' duty a week of which 35-36 hours are effectively worked. Some doubts were also expressed by Government experts concerning the feasibility of limiting the number of uninterrupted hours of work at a control position, and the 2-hour limit proposed required more intensive study.
51. The Worker experts explained that the 32-hour limit was reached on the basis of their direct work experience.
52. On behalf of a Government expert, it was pointed out that there should not be an absolute limit on shift hours. However, there should be regular fixed breaks. If a controller suffered from stress, he should be transferred to other duties.

53. A Worker expert drew attention to the dangers of overtime work, especially when the number of staff was insufficient and the volume of traffic heavy. This resulted in fatigue, and endangered air safety. It was also pointed out that the variations in workload at different times of the day should be taken into account. There should be a break after two hours when traffic was intense. Night work should be forbidden after a certain age. ATCOs should have a shorter working week than other categories of workers and overtime should be banned except in cases of force majeure. It was also stated that pilots were very concerned about the working hours of ATCOs, since efficiency diminished proportionately with length of working hours, and this could have serious consequences on the safety and regularity of flights.
54. Government and Worker experts exchanged texts which led to agreed conclusions with respect to this area of concern. These were subsequently submitted to the Chairman for discussion by the experts. Several Government experts indicated that limits on hours of work, and the assignment of overtime, should be flexible and adapted to local conditions. Furthermore, such limits should be determined in relation to fatigue, and therefore only net hours of work which would exclude meal breaks should be counted as “hours actually worked”. The Worker experts preferred a more flexible approach and thus wanted all hours of attendance at the workplace to be considered as “hours of Work”, which would include both meal breaks and rest periods. If ATCOs were to be compared to other categories, then this comparison should be based on an equitable common denominator.

## Remuneration

55. With respect to pay levels and components the Worker experts emphasised the economic value and contribution of the ATCO’s work, the ATCO’s responsibilities, short working life and high specialisation which made re-employment difficult. Current pay systems took little or no account of these factors. ATCOs were unique, and should in principle not be compared with any category of workers other than airline pilots. This had been done in New Zealand in March 1979 on the finding of the Government Services Tribunal and in Venezuela through the ATCO association. The ATCO’s legal liabilities had been growing, perhaps unwillingly, in some countries. The professions of pilot and ATCO were justifiably comparable due to similarities in licensing requirements and practices, health hazards such as hypertension and stress, and the risk of losing a job through loss of licence.
56. The Government experts acknowledged that ATCOs deserved full recognition of their unique profession. In Mexico, for example, they were paid in accordance with the important responsibilities inherent in their profession. If ATCOs were to be compared to pilots, since they are civil servants they could be compared also to government or even military pilots, not necessarily airline pilots. Moreover, as a civil servant an ATCO enjoyed better employment security than a pilot, and if he lost his licence he would be re- employed. As to hypertension and early incapacity among United States ATCOs, findings there were hardly applicable elsewhere, in part due to the number of hours worked and the methods by which employees are assigned to the high-density positions.

57. The Worker experts stated that military pilots and civilian airline captains had totally different responsibilities and could not be compared. Moreover, flying or aviation experience was in most countries considered an asset for an ATCO candidate. If ATCOs could not be compared with airline captains, they should not be compared with civil servants either. ATCOs were unique and in principle should not be compared with anyone, but if a comparison were inevitable, airline captains would be the only realistic yardstick.
58. The observer of IFALPA agreed that the ATCO's profession was unique, and wondered whether any comparison was justified other than with the ATCO's performance, and professional responsibilities. He indicated that he believed that it was inappropriate to pay controllers at comparable levels to pilots. Unique professions require unique remuneration systems, and comparing the ATCO with a civil servant was just as wrong as comparing him with a pilot.
59. A Government expert felt that a unique profession should be assessed uniquely. In the United Kingdom, the Civil Aviation Authority was now undertaking a job evaluation survey among its employees and would negotiate remuneration levels with the trade unions on the basis of its findings.
60. A Worker expert declared that the security of employment offered by the civil service should not be taken as a pretext for underpaying the ATCOs. Several Government experts, however, emphasised that this security of employment did and should have an impact on the ATCOs' remuneration and should certainly be taken into consideration when their remuneration was being determined.
61. With regard to the impact of remuneration on staffing and turnover, the Worker experts felt that in the interest of safety remuneration should be sufficient to attract and retain highly qualified staff. This was not so in many developing countries where ATCOs were leaving for better paid jobs after being trained at great cost. Such systems were also unsafe because of constant staff turnover. Employers should take staffing and turnover into account when determining remuneration levels.
62. The observer of IFALPA fully supported the views of the Worker experts. A highly proficient ATCO was essential to air safety, and mistakes could have fatal consequences.

### **Age of retirement and pensions**

63. Several Government and Worker experts referred to early retirement pensions for air traffic controllers existing in various countries. For example, in one country this age was fixed at 55, whereas in some other countries their retirement age was set at 50. It was pointed out, however, that the great majority of ATCOs were disqualified from their work long before reaching the regular compulsory retirement age of other employees. In one country, ATCOs were entitled to retire with a full pension after 20 years of service, regardless of age. The Worker experts felt that this example might usefully be followed in all countries.

64. The Worker experts stressed that the age of retirement must be lower for ATCOs than for other groups of workers, in view of the unique nature of their work and in the interests of safety. The medical studies undertaken so far and experience had shown that ATCOs' efficiency, and in particular their powers of concentration, tended to diminish after a certain age and this created risks for aviation safety. There should be available to ATCOs optional early retirement but there should be an age beyond which they should not continue to be employed. Since density of air traffic and conditions of work varied from country to country, the exact early age of retirement might be determined by negotiation at the national level in each case.
65. As regards the level of pensions the Worker experts pointed out that retirement at an early age penalised ATCOs because not only did they accumulate fewer years of service than other workers but they also had to retire at an age when other workers at that age were at their period of highest remuneration. They therefore urged that measures be taken to compensate ATCOs for the disadvantages of early retirement at an early age, such as a supplementary pension. In one country, such a supplementary benefit was paid between the ages of 55 (the retirement age of ATCOs) and 65, after which retired ATCOs were paid the same pensions as other people. The pensionable remuneration should be based on total remuneration (basic pay plus allowances).
66. There was general agreement that there should be a compulsory age of retirement for ATCOs, probably earlier than that applicable to other workers, which should be determined by negotiation at the national level, and that such earlier retirement should not adversely affect the level of pension benefits of ATCOs.

## **Occupational safety, health and welfare**

67. At the invitation of the Chairman, Dr. Stilon de Piro of the ILO Occupational Safety and Health Branch outlined the basic principles of occupational safety and health. A major principle underlying the ILO's International Programme for the Improvement of Working Conditions and Environment (PIACT) was that work should respect the worker's life and health. To be healthy, a working environment must provide for the worker's physiological requirements, protect him against accidents and diseases, provide adequate hygiene and recreational facilities and meet essential psycho- social requirements. While it was often difficult to establish cause and effect in the case of stress-related impairments, there was no doubt that occupationally related stress diseases occurred in many occupational settings. He referred to a number of studies which had been carried out in certain countries which were consistent in associating stress-related impairments or syndromes with the work of ATCOs. However, further research was required to identify more clearly the factors involved to measure levels of stress and to work out methods for preventing, diagnosing and treating its manifestations.
68. The Worker experts requested improvements in this field. In the long term, governments should be recommended to carry out studies on occupational safety and health and welfare of ATCOs and communicate them to the ILO. In the short term, governments should be recommended to take steps such as frequent cleaning of the premises, lighting sources, etc.; reducing overcrowding of the rooms; suppressing all possibilities for dazzling glare; maintaining of air conditioning; providing sufficient number of sanitary facilities, etc.

69. On the question of stress, several Worker experts pointed out that their conditions of work subjected ATCOs to unacceptable levels of stress which caused deterioration of their level of health and performance and thus endangered air safety. A Worker expert pointed out that the constant increase in the amount of air traffic to be handled was also an important cause of stress and States should therefore collaborate internationally in working out methods of predicting and regulating traffic flows so as to reduce the burden on ATCOs. Another Worker expert stated that the difficulties which ATCOs encountered in having to use inadequate equipment added considerably to their stress and that air traffic controllers should therefore be directly involved in the selection and design of their technical equipment; ICAO should be recommended to lay down specific international standards in this respect.
70. A medical personal adviser to a Government expert agreed that, while there were no agreed criteria for the definition and measurement of stress, there was a need to continue work in this field, particularly through inter-disciplinary studies, because of the suspicion that ATCOs were more prone than other groups of workers to hypertension and coronary diseases.
71. As regards the physiological effects of ATC work, a personal adviser to a Worker expert referred to a recent study in the United States, which had brought out the harmful effects of microwave radiations on the eyesight of controllers. More studies should be carried out on this subject and governments should be asked to take measures to reduce visual fatigue resulting from ATC work. A medical personal adviser to a Government expert disputed these findings as not having secured acceptance internationally by specialists in this field; in his view, there was no evidence that properly designed ATC equipment produced any harmful emissions. A Worker expert pointed out that the findings of the above-mentioned study had not been contradicted by any other studies.
72. The Worker experts pointed out that the physical premises and facilities provided to ATCOs were unsatisfactory in many countries. ATCOs and their organisations should be consulted at the initial stage in the design of ATC premises. A Government expert drew attention to the special problems faced by developing countries, and urged that standards be laid down at the international level with regard to the design of control towers and rooms. A Worker expert felt that IFATCA could be of assistance in establishing such standards.
73. The Worker experts stressed the need to provide all control towers with adequate escape facilities in case of fire. A Worker expert drew attention to the need to protect the safety of ATC facilities and staff not only against natural disasters but against other hazards such as terrorist attacks.

74. There was general agreement that the medical examination for the selection of ATC candidates should take place before training was begun, since no licence could in any case be issued unless the applicant was found medically fit for this work. Such a medical examination should be thorough and in accordance with the standards laid down by ICAO. The Worker experts referred to the policy laid down by IFATCA on medical provisions for air traffic controllers and stressed in particular that medical centres should be established for ATCOs; there should be regular medical examinations for ATCOs and appropriate medical follow-up, so as to ensure that preventive measures could be taken against any medical problems which might affect their capacity to perform their functions and that any health problem coming to light would be treated. In the latter event, ATCOs should have the option of being examined by the specialist of their choice. The medical files of ATCOs should be accessible to them and their own physicians.
75. Some Worker experts and a medical personal adviser to a Government expert felt that it would be desirable to eliminate from the outset on medical grounds any candidates who might be prone to develop hypertension at a later stage. In this connection, there was some discussion as to the possible role of aptitude or personality tests in determining whether a particular candidate was suitable for this type of work. Several experts felt that, while psychological factors might need to be taken into account, great care should be exercised in applying criteria of this kind and that they should be balanced against all other relevant factors. One Worker expert felt that only educational qualifications and physical aptitude should be taken into consideration in selecting candidates, since one could not determine at an early age that a person was psychologically unsuited for ATC work.
76. The Worker experts mentioned that in many countries recreational and sports facilities were provided for ATCOs close to their workplace; such facilities were very important for ensuring that ATCOs maintained the necessary physical fitness. Adequate rest and hygiene facilities at the workplace were at present lacking in many places and should be provided for ATCOs everywhere. Such facilities should, in particular, be planned and installed whenever new ATC premises were constructed in any country.

### **Legal liabilities of air traffic controllers**

77. The Worker experts stressed that the right of being associated with incident and accident investigations had already been recognised for other professions in civil aviation. They emphasised the value of the ATCO as a source of information on ATC performance, and suggested that a system of incident reporting and investigation which would not penalise the ATCO should be established in the interest of safety. Immunity from disciplinary action for ATCOs who were found to have committed human error should be a prime feature of such a system. ATCOs frequently did not report on incidents for fear of subsequent sanctions. The US system of reporting incidents to a third party (NASA) was an excellent one.
78. The observer of IFALPA fully supported such a system which would help prevent future accidents.

79. The Government experts expressed agreement with these views. A mandatory occurrence reporting system was satisfactorily operating in the United Kingdom. However, total immunity for ATCOs would be illogical. It depended on the seriousness of the employee's behaviour and whether it was considered to be gross negligence. This protection should not prevent the authorities from providing the ATCO involved with additional training to improve his proficiency. In India and other countries, ATCOs were involved in investigation procedures, but the question of an immunity system would have to be examined by the government.
80. The observer of IFATCA outlined his Federation's policy with respect to the criminal, civil and disciplinary liabilities of ATCOs. IFATCA advocated that ATCOs should not be criminally liable for simple human errors, and wished for better protection of the ATCO against individual lawsuits where vicarious responsibility did not apply, or was insufficient. Clear laws and regulations were essential to enable the ATCO to exercise his profession efficiently.
81. At the invitation of the Chairman, Mr. I. Chambers of the Office of the ILO Legal Adviser drew the Meeting's attention to the difference between intent and intention. No legal system recognised vicarious criminal liability, but an ATCO might in some legal systems have independent civil liability which might be invoked against him either separately from that of his employer, or jointly, and only legislation could abolish the ATCO's independent liability and thus protect him. Where ATCOs had no independent civil liability only the employer could be sued.
82. The Worker experts described several cases in Australia and the United States in which ATCOs were found guilty either of adhering strictly to the rules or, on the contrary, of departing from them. ICAO should be reminded of not overlooking the ATCO's interests when considering an international convention on the legal liability of air traffic control agencies. Mr. Chambers mentioned that the Australian case was a special one, although it could happen elsewhere; however, a decision of a British Columbia court in Canada rejected ATCO liability in a similar case.

### **Manpower and career planning**

83. There was general agreement that adequate manpower and career planning activities were vital to the efficiency and safety of air traffic control systems.
84. A Government expert pointed out that the problem of manpower and career planning was linked directly to that of forecasting the volume of air traffic, which tended to vary considerably from one period of the year to another. It was uneconomical to staff ATC services on the basis of peak requirements. Because of the time required for training ATC recruits, efficient manpower planning had to be carried out at least five years in advance, but it was extremely difficult to forecast the volume of traffic so far ahead, especially when a large proportion of such traffic consisted of overflying of national territories. Another Government expert pointed out that there were financial limitations to manpower planning, since ATC services were run everywhere on a non-profit basis.

85. Some Worker experts expressed the view that the difficulties of forecasting future traffic demands should not be a pretext for the absence of planning. The ATC services should be adapted to the demand, and not vice versa. Governments should take the risk of some overstaffing in order to allow for seasonal peaks and for an unexpected future increase in demand. As regards the likely effects of automation on staffing requirements, a Worker expert noted that in many countries excessive reliance was placed on future prospects of automation to keep ATCO figures low. A Government expert pointed out that the effects of automation were limited and were offset by traffic increases.
86. A Government expert and a Worker expert agreed that it was desirable for air traffic control authorities to co-operate with airlines for the purposes of efficient manpower planning, although it might be difficult to obtain from airlines long-term forecasts of the volume of air traffic.
87. A Government expert pointed out that the ability to staff ATC units was closely dependent on working conditions. If the status of the profession was recognised and conditions of employment improved, more ATCOs could be recruited.
88. The Worker experts stressed that a number of factors other than the volume of air traffic had to be considered for purposes of manpower planning. These factors included the operating hours of the different working positions; number and length of shifts; hours of work; holidays, annual leave; time needed for specialised and refresher courses; time needed for ATCOs to participate in the establishment of their working conditions; attrition through retirement, medical incapacity and resignations. A Government expert mentioned the trend towards recruitment of women in this profession, and therefore to plan also for maternity leave.

## **Training and retraining**

89. Reference was made to the policy of IFATCA on the training of air traffic controllers, which recommended in particular that applicants without previous aviation experience should be selected between the ages of 18 and 25 and should possess the educational qualifications required for entrance to post-secondary education in the country concerned and satisfy ICAO medical requirements. Training to licensing standards should combine classroom instruction on ATC duties and related aviation matters, including relevant material and simulation exercises, and practical experience in control work. After licensing, controllers should participate regularly in refresher training courses, and other forms of training, such as familiarisation flights, instructor training courses, supervisory and management courses, career development courses, and opportunities to prepare for alternative employment should be available to them.

90. Several Worker experts emphasised that, in order to ensure air navigation safety, the training provided to ATCOs at all stages should conform to the highest standards. Particular importance was attached to the selection and training of classroom and on-the-job instructors who should be selected from among ATCOs engaged in actual ATC work and be provided with opportunities to keep their knowledge up to date, and special instructor rating or qualification levels should be established in this respect. Retraining courses were important in order to keep abreast with technical developments, particularly when new ATC equipment and procedures were introduced. The usefulness of simulators as a training method contributing to a higher level of safety was mentioned by several Worker and Government experts.
91. A Government expert pointed out that selection criteria and training programmes differed considerably from country to country. Since it was important to ensure that candidates for ATCO work should meet certain basic requirements, international standards should be laid down as regards the aptitudes required for ATC work. Another Government expert stressed the heavy cost for developing countries of training ATCOs; substantial assistance should be given to such countries to overcome this problem. Another Government expert felt that it would be desirable for ATCOs to be given training wider than the requirements of their profession. A Worker expert considered that controller training should include the acquisition of a private pilot licence.
92. A Worker expert drew attention to the problems arising in certain countries due to the inadequate level of training provided to military air traffic controllers.

### **Employment security**

93. The Worker experts stressed the importance of employment security, since ATCOs were in constant danger of losing their job by reason of the loss of their licence on grounds of medical or technical incapacity. In view of their high degree of specialisation, it was difficult for them to adapt to other kinds of work with comparable levels of remuneration. Although controllers who were employed by public authorities could in principle be re-employed within the civil service, the number of suitable jobs at an appropriate level of responsibility within the civil was in practice highly limited in view of the ATCOs specialised background, training and experience. Provision should therefore be made for loss of licence insurance schemes and second career programmes for ATCOs in all countries, both of which should be sponsored by the employer. A Worker expert drew the Meeting's attention to the particularly delicate situation of ATCOs employed by private companies, who did not benefit from guaranteed employment despite operating in a monopolistic environment, and who nevertheless had been provided with certain guarantees concerning loss of licence insurance and early retirement.
94. Reference was made to the special allowance paid in Australia by the Government to ATCOs in case of loss of licence. The Worker experts felt that such allowances were very important for protecting the controller's level of income, as ATCOs reached a relatively high grade and level of remuneration at an early age, which could make it difficult for them to be transferred to other administrative posts in the public service. The options of early retirement with full pension in conjunction with the possible retraining for another career inside or outside the public service should also be available to ATCOs.

## Consideration and adoption of Conclusions

95. At the request of the Meeting the Chairman submitted for consideration a set of proposed conclusions.
96. The Worker experts proposed that, in addition to the references to ILO Conventions Nos. 87, 98 and 151 reference should be made to the Workers' Representatives Convention, 1971 (No. 135 and the Paid Educational Leave Convention, 1974 (No. 140), which contained important provisions relating to facilities and time off for trade union activities that should also be applicable to ATCOs. It was agreed to include such a reference at the end of the section dealing with industrial relations.
97. The Government expert from the United Kingdom proposed that any reference to "public employees" in the conclusions relating to industrial relations be deleted, so as not to exclude from their scope ATCOs employed by private companies. The Worker experts proposed that reference should be made throughout to ATCO "trade unions and/or other such representative organisations" so as to cover the whole range of occupational organisations representing ATCOs. These two proposals were agreed upon.
98. The Government expert from the United Kingdom stated that it would be preferable to recommend that ATCOs through their organisations should be consulted, rather than participate, in the determination of their conditions of employment and service, including the technical aspects of ATC. The Worker experts were opposed to this suggestion.

Participation in the determination of conditions affecting ATCOs was an active process whereas consultation could take place after the event or be devoid of substance. Collective bargaining was not merely a consultative process. Several Government experts pointed out that the proposed conclusion went beyond matters of conditions of employment and service; while in most countries, the right of negotiation covered conditions of employment and service, decisions on technical aspects of ATC were in the final resort the prerogative of the employer, although it was desirable that ATCOs be consulted thereon. It was finally agreed that ATCOs should, through their representatives, participate in the determination of their conditions of employment and service and should further be consulted in the conception, planning and implementation of technical provisions concerning ATC systems, the extent of such participation and consultation to be determined by national law and practice.

99. There was some discussion on whether a specific reference should be made to national joint committees in this connection. Some Government experts felt that this example was superfluous and that such committees might not be appropriate in all national conditions. The Worker experts pointed out that such national joint committees of ATCO organisations and ATC authorities already existed in some countries, and were a useful example to be followed. It was finally agreed to refer only to joint committees, the precise coverage of which should be decided upon in each country in agreement between the organisations and authorities concerned.

100. The Worker experts were in favour of a proposed conclusion which would state that the machinery for the settlement of disputes should not exclude the right to strike in principle but, in view of the serious economic, social and other consequences of the withdrawal of ATC services, this right should be resorted to by ATCOs only under specific conditions after all available procedures for dispute settlement have been exhausted and with the guarantee that ATC services which are essential to the health and safety of the public are assured.
101. The Government expert from the United Kingdom proposed that such a conclusion be qualified by the proviso that the right to strike be recognised in principle if national law so permits. The Worker experts said that they could not accept this proposal, since it would amount to maintaining the status quo, which everybody recognised to be unsatisfactory and had led to illegal strikes and serious disturbances in the operation of ATC services. Even in countries where the right to strike of ATCOs was not provided for under national law, governments should, in principle, recognise this right which was one of the inalienable rights of all workers.
102. The Government expert from Japan stated that he could not accept any reference to the right to strike, since in his country ATCOs were part of the public service which did not have the right to strike. The Government expert from India stated that his Government did not recognise the right to strike of ATCOs. The Government expert from Australia said that, while he could sympathise with their position to some extent, ATCOs had no right to strike under Australian law. The Government expert from Mexico said that, as an expert, he could take no stand on this issue, which was for governments to decide. The Government expert from France recalled that the right to strike for ATCOs had existed previously in his country but had proved unsatisfactory and had been abolished by law in 1964.
103. The Government expert from the Federal Republic of Germany stated that, while there was no objection to including in the conclusions the principles of general policy embodied in ILO Conventions which were already in force, the present Meeting should not go beyond the provisions of these Conventions since this would amount to pronouncing upon issues of national policy relating to industrial relations. The right to strike was not referred to anywhere in the relevant ILO Conventions. While he did not object to this proposal being mentioned in the report as the opinion of the Worker experts, it could not be incorporated in the agreed conclusions of the Meeting.
104. After some further discussion, the Worker experts proposed that the conclusions of the Meeting on this point should be based on the principles embodied in Paragraph 19(2)(c) of the Nursing Personnel Recommendation, 1977 (No. 157), so as to provide that the settlement of disputes arising in connection with the determination of terms and conditions of employment should be sought through negotiation between the parties, or through independent and impartial machinery, such as mediation, conciliation and voluntary arbitration, with a view to making it unnecessary for the organisations representing ATCOs to have recourse to such other steps as are normally open to organisations of other workers in defence of their legitimate interests. There was some parallel between the situation of nursing personnel and air traffic controllers, since in both these professions there were workers both in public service and private employment and they both provided services which were, to some extent, essential. The Government expert from France objected to ATCOs being assimilated to other workers in general; in countries such as his own where ATCOs did not have the right to strike, one could

not in this respect validly put ATCOs on the same footing as other groups of workers for whom the right to strike was recognised by law. It was finally agreed that the conclusions should incorporate a recommendation providing that the settlement of disputes arising in connection with the determination of terms and conditions of employment should be sought through negotiation between the parties, or through independent and impartial machinery such as mediation, conciliation and voluntary arbitration, with a view to making it unnecessary for the organisations representing ATCOs to have recourse to industrial action.

105. The Government expert from the Federal Republic of Germany stated that, while he did not oppose the inclusion of this proposal in the conclusions, his abstention on this point should be recorded. He could not follow the other experts in accepting Paragraph 19(2)(c) of Recommendation No. 157 concerning nursing personnel as a basis for regulating the situation of ATCOs. In his opinion, the only guideline could be Articles 7 and 8 of Convention No. 151 dealing with the position of public servants; when the application of this Convention would be considered in the Federal Republic of Germany; the special constitutional situation would have to be taken into account.
106. After some discussion on standards of ATC equipment, during which the Worker experts argued that ATCOs should be provided with the very best equipment so as to ensure the highest level of safety, and some Government experts pointed out that heavy financial outlay might in some cases result only in a marginal increase in safety, the Meeting agreed to state that ATCOs should be provided with ATC equipment commensurate with operational requirements so as to promote an optimum level of safety.
107. The Government expert from the United Kingdom proposed that it should be specified that it was in areas where civilian air traffic predominates that a civilian ATC system seems preferable to a military one for the controlling of civil air traffic. After a lengthy discussion on this question in the light of such factors as the separate or concurrent use of airspace by civil and military aircraft, civilian air separation standards and the relative professional qualifications of civilian and military controllers, it was agreed that in areas where civil air traffic, in the normal course of events, predominates or where civil airspace is clearly defined, a civilian ATC system is preferable for controlling air traffic, the ICAO policy being that one controller should be responsible for any given area of airspace at any given time.
108. On the proposal of a Worker expert a statement was included to the effect that, in order to guarantee air safety, recourse should not be had to replacement ATC staff who do not have the required national or international qualifications. The Worker experts stressed that such staff should be familiar with the airspace they were controlling.
109. After a lengthy discussion on the maximum hours of attendance at the place of work, during which the Worker experts felt that these should include meal breaks and rest periods, and some Government experts felt that only rest periods should be included, it was agreed that the maximum hours of attendance at the place of work per week by ATCOs should normally be less than the generally accepted number of hours of attendance per week completed by other workers in civil aviation in the State concerned.

110. The Government expert from the United Kingdom stated that he could not agree with the conclusions on the maximum hours of attendance in view of the hours of work for Civil Aviation Authority ATCOs in his country. The Government expert from the Federal Republic of Germany pointed out that in his country the same objective is achieved by means of scheduling breaks.
111. The Worker experts felt that in the interest of safety the limit on shift lengths embracing periods of high activity should be absolute. Several Government experts pointed out that some flexibility was essential to allow for local conditions since in some countries the ATCOs themselves preferred to work longer shifts. It was agreed that shift lengths which embrace periods of high activity should not normally exceed 8 hours and in other cases should not exceed 10-12 hours.
112. While the Worker experts felt that the general practice should be to provide ATCOs with 30-minute breaks after two hours' duty in all cases as was done in a certain number of countries, some Government experts doubted whether this should be laid down as a rigid rule except during high traffic density periods. It was finally concluded that agreement should be reached between ATCO trade unions and/or other such representative organisations and local managements as to which positions the entitlement and frequency of rest periods should apply. In view of the difficulty of defining the precise circumstances (e.g. emergency or force majeure) under which overtime might be allowed, the Meeting agreed that overtime should be avoided.
113. The Worker experts named several countries in which ATCOs were entitled to extra leave above that of office workers in general and shift workers in particular. It was recognised that this principle had been established in some countries.
114. At the request of the Worker experts, a reference to the Discrimination (Employment and Occupation) Convention, 1958 (No. 111), embodying principles which should be applicable to ATCOs, was included at the end of the section on remuneration.
115. The Government expert from the United Kingdom pointed out that the remuneration related job evaluation survey in his country to which reference had been made concerned all Civil Aviation Authority employees and not just ATCOs. Some Government experts suggested that the uniqueness of the ATCO profession should be qualified as being the opinion of the Worker experts, but after the latter pointed out that an Australian judicial body had defined the ATCO profession as "sui generis", it was agreed that the conclusions of the Meeting should refer to the uniqueness of the air traffic control profession.
116. After further discussion on the principle and feasibility of comparing ATCOs and pilots, in particular airline captains, for remuneration purposes, the Meeting agreed that because of the uniqueness of the air traffic control profession, it did not readily lend itself to comparisons with other professions. However, to ensure that the ATCOs' remuneration was commensurate with their responsibilities, it should be noted that one of the professions in which the responsibilities assumed closely resembled that of the ATCO is that of the professional pilot.

117. The Meeting agreed that the principle of an early age of retirement should be recognised for ATCOs, that such an age should not be made compulsory so as to allow ATCOs to go on working provided they were fit to do so and that this age should be determined by negotiations at the national level between the employer and ATCO trade unions and/or other such representative organisations.
118. There was agreement that the requirement for retirement at an earlier age than that of other employees should enable ATCOs to receive pension benefits as if service had continued to normal retirement age. However, the problem of assessing and calculating such benefits gave rise to a lengthy debate on the factors which should be taken into account in calculating pension benefits. Several experts stressed that any conclusion should state principles and not go into specific details on their implementation. It was finally agreed that the method of assessment of such benefits should be the subject of negotiation.
119. Regarding Studies and research on health and welfare, the Meeting agreed, on the proposal of the Government expert from the Federal Republic of Germany and the Worker expert from Zambia, to delete any reference to hypertension and coronary heart diseases among ATCOs and introduce a reference to the impact of stress on the ATCOs, and to the prevention of stress.
120. On the proposal of the Worker experts the Meeting agreed that the medical examination system should include aptitude tests specifically geared to ATC requirements, without specifying whether or not these tests should be physical and psychological. The Government expert from the United Kingdom made known the doubts expressed by his medical personal adviser that, at least in his country, medical ethics would not admit that a patient could consult his own medical file. The Worker expert from Norway pointed out that in his country physicians had no right to prohibit their patients from receiving any information regarding their health. After some discussion, it was agreed that the ATCO should be entitled to have his medical file forwarded to his own physician at the latter's request.
121. The Worker experts proposed that nationally compiled statistics on the medical aspects of the ATCO profession should be forwarded to the ILO for collation annual publication in collaboration with the World Health Organisation (WHO), as a basis for future research. After the representative of the Director-General explained the budgetary constraints within which the ILO had to operate, it was agreed to mention that it would be desirable that the ILO in co-operation with WHO should collate the statistical results and that they should be published annually.
122. The Worker experts stressed the value of the ATCO as a source of information on the ATC system, and emphasised the necessity for establishing a system of reporting incidents, observations and suggestions which would not sanction or penalise the ATCO for human error. The Government experts felt that to take account of national law and practice, the establishment of such a system should first be considered in each country. Furthermore, while in order to be effective such a system should induce the ATCO to report on all incidents, it should not grant the ATCO immunity in cases of dereliction of duty, disregard for the law and gross negligence which would be made known by means other than the ATCO's reports. The Meeting agreed to these principles being reflected in the conclusion. The Government expert from the United Kingdom requested that his abstention on this conclusion be put on record.

123. The Worker experts pointed out that the right to participate in all stages of the investigation of incidents and accidents should be recognised for ATCO trade unions and other representative organisations, as it had already been recognised for other professions in civil aviation, such as pilots. Some Government experts, while acknowledging that the ATCO who was involved himself in an incident or accident had a right to participate formally in the investigation procedure, doubted whether such participation was professionally or ethically desirable, let alone legally possible, except perhaps in the event that action was being taken against the ATCO, and only at the time such action was being considered. It was finally concluded that in every country ATCOs involved in the investigation of incidents and accidents should be entitled to representation from their trade unions and/or other such representative organisations to the extent that is legally possible. The Government expert from the United Kingdom stated that he did not agree with that conclusion. The Government expert from France requested that his abstention on this point be put on record.
124. Several Government experts proposed to specify that legislation should abolish the independent civil liabilities of ATCOs, and the Worker experts stressed the need for providing the ATCO with legal counsel in addition to legal protection. Both proposals were accepted.
125. On the proposal of the Worker experts, trade union activity leave was included among the factors to be taken into consideration in staffing formulae.
126. The Worker experts' proposal that training to private pilot licence standard should be part of the training process met with the objection of several Government experts who pointed out that such a training was not necessary to become an ATCO, and that many competent ATCOs had no pilot licence at all. Moreover, familiarisation flights provided the ATCOs with all the necessary knowledge of aircraft performance and pilot workload. On the proposal of the Chairman, it was agreed that training to private pilot standard could be considered where it would usefully contribute to the training programme. The Government expert from Australia requested that his abstention on this conclusion be put on record.
127. On the proposal of the Worker experts it was agreed to insert a new paragraph stating that, in order to sustain the required high degree of aviation safety and the high ATC standards and also to keep the ATCO abreast with aviation progress, it is considered essential that ATCOs receive regular refresher courses and benefit from regular familiarisation flights. The frequency of such courses and flights may be agreed upon by the ATCO trade unions and/or other such representative organisations and the respective aviation authorities. A Government expert proposed to add a sentence stating that in the interest of safety, a system of regular proficiency checks should be established for the ATCOs. A Worker expert pointed out that in Norway ATCOs had resisted proficiency checks and the Government had accepted their position. On the proposal of a Government expert, it was agreed to replace the word "checks" by "checking".
128. A new test incorporating all the amendments agreed upon was then circulated to the Meeting of Experts. The Meeting approved the draft conclusions as revised, with a few editorial changes. The text of the conclusions as finally adopted is reproduced in Appendix I.

## Consideration and adoption of the report

129. A draft report on the proceedings up to the point at which the Meeting began the consideration of conclusions was submitted to the Meeting at its final sitting. It was agreed that the Office would prepare a draft record of the subsequent proceedings and that this would be sent to the Chairman, whom the Meeting entrusted with the task of correcting and approving it on its behalf. Paragraphs 95-135 were drawn up in accordance with this procedure.
130. Several Government and Worker experts requested that certain specific paragraphs be corrected or expanded to give a better representation of particular points and views they had emphasised during the Meeting.
131. A Worker expert questioned the statement made by the Government expert from the Federal Republic of Germany and reflected in paragraph 24 regarding the ATCOs' demands in his country in 1973.
132. Regarding a lower age of retirement for ATCOs, several Government experts considered that the medical studies referred to by the Worker experts were not fully conclusive on that point.
133. After taking note of all the corrections and editorial changes, the Meeting unanimously adopted the part of the report before it, as amended. The remainder of the report was drawn up and approved in accordance with the procedure described in paragraph 129.

## Closing speeches

134. The Government experts thanked the Chairman for his excellent guidance and for the way he had steered the Meeting to a success. The Worker experts congratulated the Chairman on his able leadership, expressed their gratitude for having been given this opportunity of discussing the problems of the ATCO profession, and voiced their hope that this profession would gain its proper recognition within the aviation world. Several observers of non-governmental international organisations also expressed their appreciation of the Meeting and its successful outcome. The representative of the Director-General associated the secretariat and the Office to the compliments paid to the Chairman and thanked all participants for their valuable contribution.

135. The Chairman expressed his appreciation to the Vice-Chairman, the experts and all other participants for their contribution to the work accomplished. He felt that it had been a very useful and pleasant experience for him and that the Meeting's success stemmed from the degree of co-operation and goodwill shown by the experts themselves. He also thanked the representative of the Director-General of the ILO, the Executive Secretary and the staff members of the secretariat for the excellent work and dedication which they demonstrated, and which had contributed in a very significant way to ensuring the success of the Meeting.

Geneva, 6 July 1979

(signed)  
P. V. Dawson,  
Chairman

## APPENDIX I

### CONCLUSIONS

The experts discussed a wide range of problems concerning air traffic controllers (ATCOs). Recognising that this profession is unique and has certain specific features which have to be taken into account in identifying its problems and finding solutions to them, they have agreed to put forward the following recommendations:

#### Industrial relations

1. The governments of all ILO member States should be urged to ratify and apply the Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87), the Right to Organise and Collective Bargaining Convention, 1949 (No. 98) and the Labour Relations (Public Service) Convention, 1978 (No. 151), as their provisions embody principles which should be recognised as applicable to ATCOs.
2. In particular, ATCOs should have the right to establish and join organisations of their own choosing without previous authorisation. These organisations should have the right to draw up their own constitutions and rules, elect their representatives in full freedom, organise their administration and activities and formulate their programmes without interference from public authorities. These organisations should not be dissolved or suspended by administrative authority and should have the right to establish and join federations and confederations. Any such organisation, federation or confederation should have the right to affiliate with international organisations.
3. ATCOs should enjoy adequate protection against acts of anti-union discrimination in respect of their employment. In particular the employment of ATCOs should not be made subject to the condition that they shall not join or that they shall relinquish membership of an ATCO trade union or other representative organisation, and they should be protected against acts calculated to cause their dismissal or otherwise prejudice them by reason of membership of such an organisation or because of participation in the normal activities of such an organisation.
4. These organisations should enjoy complete independence from employers and/or public authorities, and adequate protection against any interference by an employer and/or public authority in their establishment, functioning or administration.
5. ATCOs should participate, through their trade unions and/or other such representative organisations, in the determination of their conditions of employment and service. Furthermore, ATCOs should be consulted in the conception, planning and implementation of technical provisions concerning ATC systems, for example, through the establishment of joint committees of ATCO organisations and ATC authorities. The extent of this participation and consultation should be determined by national law and practice but in all cases, they should take place in the early stages of the decision-making process where feasible.

6. Procedures appropriate to national conditions should be established to encourage and promote voluntary negotiation designed to resolve issues related to terms and conditions of employment.
7. Industrial disputes in ATC are due to a variety of causes. In particular there appears to be a correlation between their occurrence and inadequate professional recognition, quality of ATC equipment, a lack of capacity of ATC systems to cope with peak demand of air traffic as well as concern with wages and working conditions. This correlation appears to be more evident in situations where adequate dispute settlement machinery does not exist.
8. The settlement of disputes should be sought as may be appropriate to national conditions, through negotiation between the parties or through independent and impartial machinery, such as mediation, conciliation and arbitration, established in such a manner as to ensure the confidence of the parties involved. Where ATCOs are employed by the government, their civil servant status should not preclude them from having access to the following procedures: in particular, the settlement of disputes arising in connection with the determination of terms and conditions of employment should be sought through negotiation between the parties, or through independent and impartial machinery, such as mediation, conciliation and voluntary arbitration, with a view to making it unnecessary for the organisations representing ATCOs to have recourse to industrial action.
9. The principles relevant to trade union activities which are embodied in the Workers' Representatives Convention, 1971 (No. 135) and the Paid Educational Leave Convention, 1974 (No. 140) should be recognised as applicable to ATCOs.

### **Social and labour aspects of the ATC system**

10. The technical aspects of any ATC system have a definite impact on the social and labour problems of ATCOs, and in most cases it is difficult to consider the two groups of issues separately.
11. In all countries research should be carried out with a view to defining the capacity of the ATC system and the ATCO's workload. Such research should take account of the differences among ATC regions, units and even sectors.
12. Although the findings of such national research cannot be directly applied in other countries, an exchange of information would be beneficial to States having similar ATC conditions and systems. The ILO, in collaboration with other international organisations concerned, should collect and disseminate such findings and information.

13. The ILO should call the attention of the International Civil Aviation Organisation (ICAO) to the need for establishing international minimum standards concerning the design and maintenance of ATC premises and ground equipment, the type of such equipment and the requirements of the working environment in order to maximise safety. The ILO, as well as the World Health Organisation (WHO) and other international organisations concerned, should participate in the establishment of these standards. This suggestion does not in any way preclude States from establishing national standards which meet their requirements. ATCOs, through their organisations, should participate in the elaboration of such standards.
14. ATCOs should be provided with ATC equipment commensurate with the operational requirements so as to promote an optimum level of safety. ATCOs, through their trade unions and/or other such representative organisations, should also be consulted in the early stages on the design of new ATC premises and the type of new ATC equipment.
15. In areas where civil air traffic, in the normal course of events, predominates, or where civil airspace is clearly defined, a civilian ATC system is preferable to a military one for the controlling of air traffic. Such a system should be a well-defined organisation responsible for managing the technical, social and labour aspects of ATC. The ICAO policy is that one controller should be responsible for any given area of airspace at any given time.
16. In order to guarantee air safety, recourse should not be had to replacement ATC staff who do not have the required national or international qualifications.
17. After considerable debate on different types of ATC administration, it is recognised that, regardless of the type of structure which exists, the system should in all cases ensure sound industrial relations and the proper functioning of ATC services.

### **Hours of work**

18. ATCOs are directly involved in the safety of civil aviation and have problems which are unique to their profession, and their concern with safety could broadly be compared with that of pilots.
19. Hours of work, length of shifts, duration of uninterrupted work at air traffic control positions and other parameters of work schedules have a direct impact on air safety. It is therefore necessary to establish guidelines for work schedules to reduce fatigue of air traffic controllers.
20. Long working hours and inadequate rest periods for ATCOs are potential threats to the safety of aviation. However, it is very difficult to establish uniform standards for all countries, ATC systems, levels of traffic density and hours of the day. There are no internationally accepted medical criteria in relation to fatigue and working hours, but socio-domestic factors which are important must also be taken into account.

21. Maximum working hours per day, per week and per month with minimum rest periods should be laid down for ATCOs by the governments of all States in consultation with the trade unions and other representative organisations concerned. These should preferably be enforceable by law. For the reasons indicated in the preceding paragraphs, the maximum hours of attendance at the place of work per week by ATCOs should normally be less than the generally accepted number of hours of attendance per week completed by other workers in civil aviation in the State concerned.
22. Shift lengths which embrace periods of high activity should not normally exceed 8 hours and in other cases should not exceed 10-12 hours.
23. Timetables should be devised in consultation with staff organisations in such a manner that sufficient time is allowed to relieve fatigue, and should allow for short rest periods. The prevalent practice in some countries appears to provide controllers with 30-minute breaks after two hours' duty. Agreement should be reached between ATCO trade unions and/or other such representative organisations and local managements as to which positions the entitlement and frequency of rest periods should apply.
24. Since overtime work is undesirable from the safety as well as from the social points of view, it should be avoided.
25. The ILO should as a matter of urgency undertake a thorough investigation into the impact of fatigue and the effect of stress on ATCOs in collaboration with other international organisations, such as WHO and ICAO, and should set minimum international standards on working hours and rest periods for ATCOs, as has been done for other categories of employees such as pilots.
26. With regard to holidays and days off, the principle of extra leave for ATCOs in view of the particular demands of their profession, either above that of office workers in general or above that of shift workers in particular, has been established in some countries.

## Remuneration

27. Because of the uniqueness of the air traffic control profession, it does not readily lend itself to comparisons with other professions. However, to ensure that the ATCOs' remuneration is commensurate with their responsibilities, it should be noted that one of the professions in which the responsibilities assumed closely resemble that of the ATCO is that of the professional pilot. In fact, in at least one country, the controller's remuneration has been compared and linked to that of airline captain. In many countries ATCOs are compared to other public servants for remuneration purposes due to their employment status which has led to considerable dissatisfaction among ATCOs. In all cases, the trade unions and/or the appropriate organisations concerned should be consulted on the proposed remunerations resulting from these comparisons.

28. In the interest of air safety, when determining remuneration structure and levels, ATC authorities should take into consideration the impact of remuneration on staffing levels and turnover. The relevant principles which are embodied in the Discrimination (Employment and Occupation) Convention, 1958 (No. 111) should be recognised as applicable to ATCOs.

### **Age of retirement and pensions**

29. The principle of an early age of retirement should be recognised for ATCOs in view of the peculiarity of this profession and in the interest of air safety. This early age of retirement should be determined by negotiations at the national level between the employer and ATCO trade unions and/or such other representative organisations.
30. The requirement for retirement at an earlier age than that of other employees should enable ATCOs to receive pension benefits as if service had continued to normal retirement age, the method of assessment of such benefits to be the subject of negotiations between the employer and ATCO trade unions and/or other such representative organisations.

### **Occupational safety, health and welfare**

31. Close co-operation should be established between ATC authorities in all countries and ATCO trade unions and other representative organisations in improving all aspects of occupational safety, health and welfare.
32. Studies and research on all aspects of the occupational safety, health and welfare of ATCOs, including ergonomics and equipment design, should be carried out in all countries. ATCO trade unions and other representative organisations should be involved in these efforts from the start. These studies should be communicated to the ILO.
33. With regard to safety, control towers and control rooms should be fitted with fire and emergency exits.
34. Studies carried out at the national level indicate that a stress problem exists in ATC. There is still scope for considerable research to identify the causes of stress and its impact on the ATCOs, measure its levels and work out measures for preventing, diagnosing and treating its manifestations as soon as possible.

35. A system of initial and regular follow-up medical examinations specifically for ATCOs is essential in the interest of safety. Such a system should be geared to selection, and be capable of: detecting any medical deficiencies in ATCOs before or during their ab initio training; providing for a thorough and regular monitoring of the ATCO's health throughout his career; detecting any deterioration in his health as early as possible; and preventing such deterioration wherever possible. Such a system should include aptitude tests specifically developed for ATC requirements. The ATCO should be entitled to have his medical file forwarded to his own physician at the latter's request. Statistics should be taken and evaluated by each national authority of the medical standards of the ATCO profession, and it would be desirable that these statistical results should be collated by the ILO in co-operation with the WHO and published annually.
36. Adequate recreation, rest, welfare and sanitary facilities should be planned for and available at all ATC units. Rest rooms should be separate from the place of work and the recreation facilities.

### **Legal liabilities**

37. ATCOs are knowledgeable about the reliability and efficiency of the ATC systems, procedures and equipment that they operate and many improvements to the system originate in the lessons drawn from its failures. Therefore, in every country, it should be considered whether, in the interest of safety, a reporting system on incidents, observations and suggestions could be established, which does not penalise or sanction the ATCO, except in cases of dereliction of duty, disregard for the law and gross negligence, which would be made known by means other than the ATCO's reports.
38. In every country, where ATCOs are involved in the investigation of incidents and accidents, they should be entitled to representation from their trade unions and/or other such representative organisations to the extent that is legally possible.
39. In the light of recent court decisions in some countries and developments of case law, ATCOs in some countries may be held liable and found guilty either for strictly adhering to ATC rules and regulations or for departing from them in the interest of safety. They are therefore operating in a complex system with respect to their legal liability. Legislative action should be taken whenever necessary to harmonise air navigation and ATC regulations with developments in the law of the land on an ongoing basis.
40. Since no legal system recognises the principle of vicarious criminal liability and since under several legal systems the ATCO's civil liability may be invoked separately and independently from the vicarious civil liability of his employer, the ATCO may be sued both on criminal and civil grounds independently from his employer. Governments in the legal systems concerned should pass legislation to abolish such independent civil liabilities of ATCOs and provide them with adequate legal protection and counsel in those areas where this does not exist at present.

41. The ILO should call ICAO's attention to the need to safeguard the ATCO's legal interests when ICAO is considering an international Convention on the liability of air traffic control agencies, with a view to ensuring, in particular, that the ATCO will not be individually and independently sued for damages over and above the limits to be stipulated by that Convention.
42. The ILO should collect and disseminate all relevant information on this subject, and undertake a study of the ATCO's legal liabilities and legal position in different countries.

### **Manpower and career planning**

43. Adequate manpower and career planning activities are vital to the efficiency and safety of air traffic control systems. These programmes should take into account all relevant factors such as seasonal fluctuations, air traffic forecasts in the short and medium term, the capacity of ATC systems, the ATCO's workload and capacity to handle traffic, the number of control positions needed, the level of competence and qualifications of staff and staffing formulas. A closer co-operation between airlines and air traffic control services is desirable in this respect, in order to overcome some of the inherent instability and fluctuations of these factors.
44. The staffing formulas should take into account all the relevant factors such as operating hours of the different working positions; number and length of shifts; hours of work; holidays, annual leave, time off, maternity leave, trade union activity leave and other days off; number of days lost on sick leave; time needed for holding positions other than actual control; time needed for specialised and refresher training courses; ATCO attrition through retirements, medical incapacity and resignations. Although these factors can be forecast with relatively greater accuracy than the ones outlined in the preceding paragraph, their values may change, sometimes abruptly, when new conditions of work are negotiated.

### **Training and retraining**

45. In the interest of safety, the existing international guidelines for the training of ATCOs should be revised and the ILO should bring this to ICAO's attention.
46. With regard to recruitment, ATCO candidates with no previous aviation experience should be normally recruited between 17 and 25 years of age and their general education should be relevant to civil aviation, and at university entrance level. The basic training programme should provide for three phases before licensing: classroom instruction; exercises with simulators on ATC procedures; and practical experience. Training to private pilot licence standard could be considered where it would usefully contribute to the training process.
47. In order to sustain the required high degree of aviation safety and the high ATC standards and also to keep the ATCO abreast with aviation progress, it is considered essential that ATCOs receive regular refresher courses and benefit from regular familiarisation flights. The frequency of such courses and flights may be agreed upon by the ATCO trade unions and/or other such representative organisations and the respective aviation authorities. In the interest of safety, a system of regular proficiency checking should be established for the ATCOs.

48. Post-licensing training should provide for retraining courses prior to the introduction of new ATC equipment and procedures. Simulators could be suitable tools for on-the-job training, despite the complex problems their introduction would imply.
49. Both classroom and on-the-job instructors should be carefully selected and given adequate pedagogical training prior to their work. Classroom instructors should generally be selected from among ATCOs engaged in actual ATC work and be provided with opportunities to keep their knowledge up to date. A specific instructor rating, or qualification level, should be established as a distinct category of ATCO to facilitate the ensuring of proper selection of high quality instructors.

### **Employment security**

50. Throughout his career the ATCO is exposed to the concrete and constant risk of losing his licence on grounds of medical or technical incapacity, thereby ceasing to be able to exercise his profession and thus losing his livelihood. Since the number of suitable and meaningful posts for re-employing the ATCO within the civil service is rather limited in view of his specialised background, training and experience, employer-sponsored loss of licence insurance schemes and employer -sponsored second career programmes should be encouraged for ATCOs in all countries, more particularly where ATC is run by a private company and where re-employment possibilities are thus even more difficult to obtain. If the ATCO is to be re-employed after he has lost his licence, he should be given thorough retraining for his new post.
51. Since ATCOs attain a high level of professional specialisation and remuneration at a relatively young age, the impact on their incomes of loss of licence is much more significant than for other groups of workers. Consequently, the retraining requirements are greater and the difficulties more severe when ATCOs are reassigned to other positions to learn new responsibilities.
52. The Governing Body of the International Labour Office is invited to consider placing on the agenda of an early session of the International Labour Conference the question of conditions of employment and service of air traffic controllers with a view to the adoption of an appropriate international instrument.

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