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JPC/10

JOINT PROGRAMME COMMITTEE  
ONCHOCERCIASIS CONTROL PROGRAMME  
IN WEST AFRICA

Tenth session, The Hague, Netherlands  
4 - 7 December 1989



REPORT

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1. OPENING OF THE SESSION: Agenda item 1

1.1 The tenth session of the Joint Programme Committee (JPC) of the Onchocerciasis Control Programme in West Africa (OCP) was held at the Ministry of Foreign Affairs in The Hague, Netherlands, from 4 to 7 December 1989. The following members were represented: The African Development Bank, Belgium, Benin, Burkina Faso, Calouste Gulbenkian Foundation, Canada, Commission of European Communities, Côte d'Ivoire, France, Federal Republic of Germany, Ghana, Grand Duchy of Luxembourg, Guinea, Guinea-Bissau, Italy, Japan, Mali, Netherlands, Niger, Norway, Republic of Korea, Saudi Arabia, Senegal, Sierra Leone, Switzerland, Togo, United Kingdom of Great Britain and Northern Ireland and United States of America; also represented were the Sponsoring Agencies: the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP), the World Bank, and the World Health Organization (WHO), which is the executing agency for the Programme. The session was also attended by members of the Expert Advisory Committee (EAC) and the Ecological Group (EG) and by representatives of the External Auditor, the French Institute of Scientific Research for Development through Cooperation (ORSTOM) and the Mectizan Expert Committee as observers. The list of participants is attached as Annex II.

1.2 The session was opened by Her Excellency Mrs Thérèse King, Minister of Public Health of Senegal, Chairman of the ninth session of JPC held in Dakar in 1988. Participants were welcomed by Mr Jos van Gennip, Deputy Director-General, International Cooperation on behalf of His Excellency Mr Jan Pronk, Minister for Development Cooperation of the Netherlands, who, regrettably, was unable to be present owing to commitments elsewhere. He expressed satisfaction at the success of OCP in achieving its key objectives of relieving human suffering and increasing the available area of agricultural land, objectives which accorded well with the main aim of the Netherlands Development Cooperation, namely the elimination of poverty.

1.3 In the final phase of OCP, greater emphasis would need to be placed on devolution to the Participating Countries through increased transfer of knowledge and skills and strengthened links with existing infrastructures in the region, in order to ensure sustainability of onchocerciasis control in the future. Such devolution could contribute to the establishment of primary health care systems. Development cooperation should aim at creating structures that allowed countries to implement development programmes without outside assistance. There was much to be done in the area of public health and it was to be hoped that more emphasis would be given to the health component in discussions of priorities for the socioeconomic development of Africa. WHO and the non-governmental organizations would have an important role to play in that respect.

1.4 Although OCP had given due consideration to environmental issues, in particular to the impact of the pesticides used, more attention should be given to secondary environmental effects such as clearance of vegetation and soil erosion, which may follow resettlement. The Netherlands would give favourable consideration to assistance in that area.

1.5 The Netherlands would support an external evaluation of OCP which could prove an effective instrument for confirming the importance of the Programme as it entered the next phase.

1.6 In a personal message read by his representative, the Director-General of WHO said that OCP was a unique undertaking in which WHO took a great pride. In addition to combating an important public health problem, an objective of the Programme since its inception had been the removal of an obstacle to socioeconomic development. The results had been impressive, with a substantial reduction in prevalence in the Original Programme area, some 100 000 cases of blindness averted and large areas of fertile land made available for cultivation. The results were a tribute to those involved, at every level, in the support, management and implementation of OCP. The Director-General expressed his personal gratitude to all those working for the Programme.

1.7 Although it had become clear that ivermectin had limitation as a transmission control agent and that future strategy would continue to rely on larviciding, the drug would provide an excellent tool for control of morbidity and recrudescence, and the support of non-governmental and voluntary organizations for national ivermectin distribution programmes would be welcome.

1.8 The Director-General was encouraged to note that several Participating Countries had now drawn up devolution plans. He wished the session every success.

1.9 The WHO Regional Director for Africa said that in order to implement health activities in the region it was essential to develop well-organized health services, which in turn depended on political will. He paid tribute to the governments of Africa which, despite the severe economic constraints, had continued to make considerable efforts in the health sector. WHO was supporting their activities at national, regional and global levels.

1.10 The choice of Bamako as the location for the WHO Subregional Office for West Africa was, in part, a recognition of the need to collaborate more closely with OCP. In addition to the existing coordinating mechanisms, further consultations between the Regional Office and OCP were planned, in the form of at least two regular meetings per year. The WHO Subregional Office would also collaborate with OCP and with the Participating Countries, in particular regarding the promotion of devolution.

1.11 Devolution had been the subject of a recent meeting between OCP and the Regional Office, in particular activities within the framework of health development for Africa adopted by the ministers of health of the region in Lusaka in 1985 and the roles of those involved at national, OCP and Regional Office levels. Further technical discussions were planned with those responsible at national level.

1.12 Over and above its regular financial contribution to OCP, the Regional Office was providing support to Participating Countries in a number of other ways, for example, by supporting training in entomology, epidemiology and public and community health at national institutions in the region. Adequate manpower was essential for the success of devolution, and international assistance would be needed to strengthen such institutions. The Regional Office would continue to support OCP, orienting its assistance towards devolution.

## 2. ELECTION OF OFFICERS: Agenda item 2

2.1 Mr I.M. de Jong, Deputy Director Multilateral Development Cooperation, International Cooperation of the Netherlands was elected Chairman and Dr Mohamed Sylla, Secretary General, Ministry of Public Health and the Population of Guinea, Vice-Chairman.

3. ADOPTION OF THE AGENDA: Agenda item 3 (document JPC10.1 Rev.1)
  - 3.1 The agenda was adopted without comment (Annex I).
  
4. ADOPTION OF THE REPORT OF THE NINTH SESSION OF THE JOINT PROGRAMME COMMITTEE: Agenda item 4 (document JPC/9)
  - 4.1 The report of the ninth session of the JPC was adopted without comment.
  
5. REFLECTIONS OF THE COMMITTEE OF SPONSORING AGENCIES: Agenda item 5
  - 5.1 The representative of the World Bank, speaking as Chairman of the Committee of Sponsoring Agencies (CSA), said that OCP was close to achieving the first part of its objective, control of onchocerciasis in the Original Programme area so that the disease was no longer of public health or socioeconomic importance. OCP was also well on the way to achieving control in the Extension areas, despite earlier delays experienced as a result of blackfly resistance to temephos.
  
  - 5.2 OCP now had at its disposal new technical information regarding strategies for vector control and ivermectin treatment which should provide lasting control, the second part of its objective. Implementation of the approach for future control operations formulated by OCP, which had been reviewed and endorsed by the Expert Advisory Committee (EAC), coupled with effective devolution of responsibility for maintaining onchocerciasis control to the Participating Countries, should ensure that onchocerciasis will never recur as a problem of public health.
  
  - 5.3 The CSA believed that a solid foundation had been established for implementation of future strategies and for bringing the work of OCP to a successful conclusion. There were four factors. First, the Programme had acquired vast expertise over 15 years of progressively successful operations. Second, there was growing support from the Participating Countries, with national staff collaborating in entomological surveillance, epidemiological mapping and ivermectin distribution, activities which helped OCP to hold down costs and contributed to the devolution process. Third, OCP was privileged in enjoying long-term, unswerving commitment from a dedicated Donor community. On behalf of JPC, CSA welcomed the three new Donors who had joined the Programme during 1989 and were represented at the session: the Calouste Gulbenkian Foundation, the Grand Duchy of Luxembourg, and the Republic of Korea. Fourth, sound preparations were under way for devolution. Three country devolution plans had been drawn up and others were in preparation. The CSA urged the Participating Countries to implement those plans and the Donor community to provide the assistance required.
  
  - 5.4 The CSA was continuing its activities under the socioeconomic development programme endorsed by the JPC at its seventh session. The recommendations of the Hunting study, completed in 1988, had provided a basis for dialogue between the Participating Countries and Donors regarding support for development plans and follow-up actions in areas where onchocerciasis had been controlled. A second regional study, to provide operational guidelines for promotion of sustainable settlement-related development in newly available areas would be completed and disseminated during the first half of 1990. As the CSA-sponsored socioeconomic development programme neared its conclusion, the Participating Countries would need to assume responsibility for future initiatives. However, the CSA remained ready to assist in this follow-up phase as required.

6. PROGRESS REPORT OF THE WORLD HEALTH ORGANIZATION FOR 1989: Agenda item 6 (document JPC10.2)  
REPORT OF THE EXPERT ADVISORY COMMITTEE: Agenda item 7 (document JPC10.3)

6.1 The Programme Director expressed his appreciation of the special interest in the Programme shown by the WHO Director-General; he had unfortunately been unable to attend the session himself because of the pressure of other duties but was represented by Dr C.-H. Vignes, the Legal Counsel, who had been closely associated with OCP from the outset. It was also encouraging that, as in the previous two years, Dr G.L. Monekosso, WHO Regional Director for Africa, was present at the session; the more frequent consultations proposed by the Regional Office would be particularly valuable now that countries were entering upon the devolution phase.

6.2 The year had been one of positive advances and if anything the Programme was ahead of schedule. He wished to pay a tribute in that connection to the work of the statutory committees - the Committee of Sponsoring Agencies (CSA), which monitored, supported and guided the Programme, and the Expert Advisory Committee (EAC), consisting of 12 scientists, independent of OCP, who kept a watchful eye on all the Programme's activities from the scientific standpoint. The EAC was supported by an Ecological Group, consisting of internationally recognized ecological experts, also independent of OCP, which studied the results of national ecological monitoring of the rivers, carried out by OCP-trained but government-paid national staff and designed to ensure that larviciding affected only blackfly larvae while sparing the fish and other non-target fauna. In that way a tradition of careful ecological monitoring was being built up in West Africa.

6.3 Six effective larvicides had been used in judicious rotation during the year, as against five the previous year. Formulation and delivery of Bacillus thuringiensis H-14 (B.t. H-14) had been improved and efforts were being made by the collaborating chemical industry to reduce the cost of all six larvicides.

6.4 The Epidemiological Evaluation Unit had continued its assessment of the impact of vector control in the human population. Since the JPC had given its approval for large-scale distribution of ivermectin, the Unit had collaborated closely with nationals of the countries concerned in delivering the drug. That involved census-taking, epidemiological mapping, administering the tablets and monitoring and evaluating side-effects. National staff were now performing 70-80% of the work involved.

6.5 The new Chief, Administration and Management, had been most successful in implementing, together with the staff, OCP's policy of cost containment and optimal utilization of the available resources without prejudicing the success of the Programme.

6.6 Despite the severe economic crisis in sub-Saharan Africa, the Participating Countries had not slackened in their support for OCP. That was particularly important for devolution, on which previous speakers had rightly laid special emphasis since if it did not succeed all efforts of the Programme would have been in vain. The means to be used in order to ensure its success had been determined; the training of nationals had been intensified and training establishments strengthened; Donors and WHO, as the executing agency, were doing their utmost to support the Participating Countries in developing their basic health systems and the new mechanism instituted by the Regional Director would enable Regional Office and OCP experts to meet national representatives twice a year or more in order to improve coordination and collaboration with the countries.

6.7 At the previous session of the JPC, it had been suggested that Sierra Leone be used as a test case for cooperation with the non-governmental organizations. He was happy to report that very significant progress had been achieved in establishing cooperation between the NGOs active in that country, the national authorities and OCP. The Minister of Health had given exemplary guidance, support and advice and would doubtless be willing to describe later what had been attained.

6.8 The Donors had provided tremendous support during the year. Three new Donors had come forward and more were expected. As a result of the generosity of Donors old and new, the shortfall in OCP funds reported the previous year had been considerably reduced. The Donors' meeting in Paris had unanimously supported the recommendations of the EAC report, which had been distributed (document JPC10.3) and would be introduced by the EAC chairman later. He wished to express OCP's heartfelt thanks to the Donors for their continued cooperation and unstinting support.

6.9 Lastly, he wished to thank the OCP staff for their hard work and devotion to duty in the difficult conditions that obtained in sub-Saharan Africa.

#### Vector control, resistance, reinvasion and the entomological situation

##### Vector control and resistance

6.10 Larviciding operations had been stopped in the 55-60% of the core area which had been cleared of onchocerciasis. The Southern Extension area (Togo, Benin, Ghana) was now completely covered by vector control operations; Guinea and Sierra Leone in the Western Extension were also largely covered and larviciding had begun in Senegal.

6.11 Despite problems of resistance, temephos was still usable as part of a rotation in a very large proportion of the Programme area (80% of the area treated). Chlorphoxim was still available but a much higher price was being asked. Negotiations were in progress with the manufacturer in a bid to reduce the increase. Carbosulfan and permethrin were relatively toxic for the non-target fauna so that they could only be used at high rates of stream flow. The very low safety margin with permethrin meant that its use was restricted to six continuous cycles. B.t. H-14 was reserved for low rates of discharge, in view of the large doses required and the shortness of its reach, but could be used in an unlimited number of larviciding cycles since it was completely harmless for the non-target fauna. Finally, a new organophosphorus compound, pyraclofos, had proved very effective in stream trials, its reach of 10 to 30 km meaning that fewer flying hours were needed for its application. It had a moderate effect on the non-target fauna but the final conclusions of the Ecological Group were being awaited before orders were placed.

6.12 A typical rotation of insecticides was for example (Sassandra, Côte d'Ivoire) treatment with B.t. H-14 at low-water periods, followed by chlorphoxim application when discharges rose to about 50-100 m<sup>3</sup>/second and the use of permethrin (5-6 cycles) when they reached 200-600 m<sup>3</sup>/second. Larviciding was interrupted completely at discharges of 700-1500 m<sup>3</sup>/second, when most of the larval breeding sites were submerged and rapid changes in rates of flow prevented the blackfly larvae from becoming established. When water levels fell again, temephos (Abate) treatment was instituted. The system led to economies in the volume of insecticides used and the number of flying hours required.

### Reinvasion

6.13 The extension of larviciding to Arfanya in the north of Sierra Leone and the Sassenbaya area in Guinea had reduced the daily biting rates from 400 to two in the former and eliminated biting altogether in the latter; it had practically eliminated reinvasion in northwest Côte d'Ivoire and reduced the biting rate on the Baoulé in Mali from 200 biting females per day in 1988 to 20 in 1989. Several of the black spots remaining on the map indicated areas where larviciding had been suspended for ivermectin trials to be carried out; now that it was known that ivermectin could not interrupt transmission, larvicide applications would be resumed. There was still a minor problem along the Nigerian frontier. The transmission due to the forest species S.squamosum in the mountainous areas on the Togo-Ghana frontier has no real epidemiological significance.

### Entomological situation

6.14 Research in Sierra Leone on the distribution of savanna vector species had shown that they were to be found throughout the south of the country at the beginning of the rainy season but from early July onwards they moved northwards and by September could be observed only in the extreme north on the frontier with Guinea.

6.15 Centralization and computerization of all the data on larval identification had made it possible to determine the distribution of each vector species by year, month, country and rainy or dry season. Collating that information with the computerized data also available on larval sensitivity to insecticides as well as with epidemiological data made more rational larviciding possible.

### Epidemiological evaluation

6.16 The Epidemiological Evaluation Unit had increased its activities to cover 1025 villages, a result made possible largely by the use of national teams. One of its major tasks had been to map the Western Extension area in order to determine the distribution and severity of onchocerciasis, to estimate the number of people infected and blinded, to delimit the areas with a risk of onchocercal blindness and conduct large-scale ivermectin treatment therein and to evaluate the effects of vector control or ivermectin treatment or both. Among a total rural population of some four and a half million, almost one and a half million were infected with approximately 15 000 cases of onchocercal blindness.

6.17 In the Original OCP area 100 villages had been surveyed in detail with a view to determining their epidemiological status. In 1974-75 most of the villages had had over 60% prevalence of skin microfilariae. By 1989 problem areas remaining were on the Kulpawn and Dienkoa rivers; most of the villages elsewhere showed very low prevalence. The use of a mathematical model had indicated that 14 years of successful vector control were needed to prevent recrudescence of the disease and this prediction has been confirmed by the reported results.

### Ivermectin treatment

6.18 Community trials of ivermectin had shown that the drug initially led to a major reduction in skin microfilarial loads but that they subsequently rose quite steeply again. The same happened after a second administration although the increase in skin microfilarial loads thereafter was slower. The mean ocular microfilarial loads following ivermectin treatment, however, not only fell rapidly but subsequently remained at a low level, thereby reducing the risk of severe ocular disease and in some cases leading to a regression of early ocular lesions.

6.19 Also, measurement of vector infection levels following ivermectin treatment in the Asubende focus had shown that the initial steep decline after treatment was not maintained, so that transmission, although much reduced, was not interrupted. Model predictions indicated that even if ivermectin treatment were continued for 25 years, there would be a recrudescence of the disease once treatment ceased. However, it was expected that in those parts of the Programme area where vector control had ceased or was intended to stop, good surveillance coverage combined with prompt ivermectin treatment of recrudescence cases would prevent the return of the disease.

6.20 In the Original OCP area ivermectin treatment would be used only in foci of reinvasion and in a few circumscribed zones. Elsewhere the selection of areas for treatment would depend on the results of detailed mapping, since in some river basins infection was concentrated along the course of the main river, in others along the tributaries. The number of delivery teams depended on the accessibility of the villages, and in some parts of Guinea as many as six teams were needed. Thirty-six hours' monitoring following administration of the drug had revealed only minor side-effects. Coverage had been good and in the Asubende focus where now three treatments had been carried out, it had been stabilized at about 60%.

#### Administration

6.21 Against a background of financial stringency, efforts to cut costs without detriment to the attainment of the Programme's goals had continued throughout the year. Management seminars for the administrative staff had reviewed aerial operations, the consumption of larvicides and fuel, administrative and financial problems, transport and entomological and epidemiological surveillance, special importance being attached to follow-up of the recommendations that resulted. Smaller seminars on more specific points were now being envisaged. Computerization had been extended to cover every aspect of OCP's technical work and also administration, staff, purchases and in particular finance. Regular training courses and in-service training for OCP staff had dealt with technical subjects, languages, computer applications and financial and administrative procedures. In one geographical area the members of national teams had been trained and provided with detailed manuals on epidemiological activities. Special attention was being paid to the introduction of strict management procedures.

6.22 There had been a 25% reduction in the number of posts between 1987 and 1989. Vacant posts were not automatically filled. Some services, such as maintenance and cleaning, had been contracted out. In some cases one person had two functions: a driver would double as a mechanic or a fly-catcher. The Participating Countries in the Western Extension had made available a total of 335 national staff, whom they paid themselves and who received a supplement from OCP. The savings for the Programme were considerable.

6.23 The cost of supplies and services was strictly scrutinized. Purchases were well planned, a list of possible suppliers and indicative prices had been drawn up and rebates were obtained wherever possible. The stocks of larvicides had risen to about 20% of annual requirements.

6.24 Discarded vehicles were put out to sealed tender and were not automatically replaced. Seventy-three per cent of vehicles were now diesel-operated. The siting and equipment of repair and maintenance shops was carefully planned. Accident prevention programmes had reduced the number of accidents and thereby increased the efficiency of operations as well as saving money.

6.25 Finally, a computerized system for currency fluctuations had made it possible to update obligations monthly.

EAC comments

6.26 The report of EAC (document JPC10.3) was introduced by the Chairman of the Committee, who said that, on the basis of extensive consultations and visits, the EAC recognized the excellence of the work done by the Director of the Programme and his staff. Having reviewed the results of field trials, EAC was convinced that ivermectin was a safe and acceptable treatment and could prevent blindness, but it could not interrupt transmission to an extent that would provide permanent control. Therefore, although transmission studies should be pushed, control strategy should continue to be based on larviciding. Ivermectin distribution for five to seven years from the beginning of control should ensure a rapid clinical effect, after which vector control alone should bring the intensity of infection to an acceptable level.

6.27 Given the delay in the commencement of vector control operations in the Extension areas and the established requirement that up to 14 years of vector control were needed to eliminate the human parasite reservoir, OCP would need to continue vector control operations in parts of the Extension areas beyond the present limit of 1997.

6.28 EAC noted with satisfaction the continued achievements in vector control, including the effective rotational use of five larvicides, the collection of teletransmitted hydrological data and the computerization of aerial larviciding operations, which had resulted in increased cost-effectiveness. The search for new larvicidal compounds and formulations should be intensified, since vector control would remain the exclusive means of transmission control. Considerable progress had also been made in extending knowledge of different vector cytospecies in the Extension areas. Lessons learned from refined control tactics in the Southern Extension area had provided strategic guidelines for a western extension of vector control operations in the Western Extension area, designed partly to suppress populations of the non-migratory but locally important Simulium soubrense B and partly to control populations of savanna cytospecies which were important sources of reinvasion into eastern Guinea and southern Mali. In those parts of the Extension areas where the terrain was unsuitable for aerial larviciding and which were not likely to be sources of reinvasion, ivermectin would be the most appropriate means of control.

6.29 EAC commended the expanded activities of the Epidemiological Evaluation Unit, which now included detailed mapping in preparation for morbidity control with ivermectin.

6.30 EAC commended the Onchocerciasis Chemotherapy Project (OCT) on its activities and emphasized the importance in the context of devolution, of developing a suitable macrofilaricide. Since development even by the year 2010 would still be in time to deal with recrudescence of the disease in the Programme area, EAC recommended the continuation of OCT beyond the end of the third Financial Phase of OCP and strongly favoured the further integration of OCT into the WHO/UNDP/World Bank Special Programme of Research and Training in Tropical Diseases (TDR). EAC had requested OCP, in collaboration with OCT and TDR, to prepare a suitable plan for continued research for consideration at its next session.

6.31 Preparation for the implementation of devolution to the Participating Countries would need to include the training of national staff to undertake active surveillance and control of morbidity with ivermectin as part of regular basic health services. The WHO Regional Office for Africa and OCP should assist in that respect.

6.32 EAC considered that research should be continued to develop immunodiagnostic and biogenetic field tests for the rapid detection of reinfection of human populations, which were needed urgently. Further research should focus on the refinement and testing of the transmission model presented earlier, more detailed simulation studies of the potential of ivermectin treatment for recrudescence control, the effect of ivermectin on the transmission and treatment schedules, the development of an in vitro test for the detection of any possible decrease in parasite susceptibility to ivermectin, and the geographical and seasonal distribution and vectorial role of different Simulium species and forms in the Extension areas in relation to epidemiological patterns of the disease. There was also a need to develop identification techniques for the differentiation of animal and human Onchocerca parasites.

6.33 Although aware of the prevailing constraints, EAC stressed the need for speedy publication of the results of studies undertaken by OCP, which were often of immediate operational relevance. OCP staff should be afforded the time to prepare material for publication.

6.34 EAC noted that OCP would be operating within a tight budget for 1990 and 1991 but was confident that the Director of the Programme would do everything possible to limit expenditure to the forecasts presented in the modified Plan of Operations.

6.35 The Chairman of the Ecological Group of EAC said that there was now widespread concern regarding protection of the environment. To its credit, OCP had, from the beginning, undertaken aquatic monitoring and had taken care to select larvicides with as low a toxicity as possible to non-target fauna, taking account of the recommendations of the Ecological Group. As a result, after up to 15 years of operation with temephos and B.t.H-14 there had been no appreciable impact on non-target aquatic organisms.

6.36 The Ecological Group reaffirmed the need to make available adequate human and material resources to ensure continued research on new larvicides and formulations. Current concerns included the imminent withdrawal of chlorphoxim, possible resistance to permethrin and carbosulfan and their relatively high toxicity, and the fact that the possibility of resistance to B.t. H-14, although remote, could not be excluded.

6.37 Following the decision to extend larviciding to Sierra Leone, aquatic monitoring had started there, since the fauna were different to those found elsewhere in the Programme area. Sites had been selected and discussions were under way to find and train suitable staff.

6.38 The Ecological Group considered that greater efforts should be made to disseminate more widely the methodologies developed, the results obtained and the experience gained in aquatic monitoring, and noted with pleasure that several documents were being prepared for publication.

#### Discussion

6.39 Representatives of Participating Countries and Donors congratulated the Director of OCP and his staff on the considerable progress made during the year and on the continuing improvements in the cost-efficiency of the Programme's activities. The proposals made by WHO/AFRO for more frequent consultations between OCP, AFRO and the Participating Countries were particularly welcomed.

6.40 Representatives of two Participating Countries raised the question of the problem areas - the so-called "black spots". It was pointed out that they were only problem areas because larviciding had been stopped so that the transmission-interrupting possibilities of ivermectin could be investigated. Now that OCP was satisfied that the drug would not be effective in stopping transmission, larviciding would be resumed and the rapid disappearance of transmission in some areas could be confidently expected.

6.41 In reply to a question by the representative of a Participating Country regarding the reasons for interrupting larviciding in Western Mali, it was explained that the Epidemiological Evaluation Unit had found that the discrepancy between the number of infected flies and the number of infected humans was due to the flies carrying animal onchocerciasis, a phenomenon that had not been recorded elsewhere in West Africa. In addition, the larval breeding sites were situated not on the main rivers but along their tributaries, often flowing in deep gorges with dense vegetation. That situation made for difficult flying conditions and caused many problems of logistics, thus reducing cost-effectiveness, and the reduction in annual transmission potentials was insignificant. It had therefore been decided to suspend larviciding for the time being and to launch mass ivermectin treatment in the only three hyperendemic foci in the area. The whole question would be reviewed at an internal technical review meeting in Ouagadougou in January 1990.

Cooperation with Non-governmental Organizations and with local health units

6.42 Two Participating Countries and a Donor representative advocated better utilization of NGOs and local health units in Programme activities, particularly for ivermectin distribution. It was reported that successful work along those lines had been carried out in Sierra Leone; it was important for the future, since it enabled national staff to be trained in epidemiological evaluation and other disease control activities. Local personnel had the advantage of a knowledge of local traditions, which made them acceptable to the population. Liberia had already solicited the help of NGOs and OCP staff in ivermectin distribution. However, a proper framework for NGO involvement was needed; the first step was for them to seek permission to carry out the activities envisaged from the government of the country in which they were operating.

6.43 The offer from a Participating Country to make its ophthalmological survey unit available to the OCP for ophthalmological evaluation in onchocerciasis was gratefully accepted.

Ivermectin

6.44 A Donor asked why there had been such a discrepancy between the results of clinical trials of ivermectin and community trials of that drug. It was explained that the persons taking part in clinical trials were few in number, had been selected on the basis of certain criteria and had come from places not necessarily typical of the Programme area as a whole, including a district in Ghana which had already been exposed to larviciding for ten years, whereas some of the community trials were carried out in areas without vector control.

6.45 In answer to another Donor, concerned about possible long-term adverse effects from ivermectin treatment, it was stated that observations of up to one year had detected only mild, short-lived and infrequent reactions to the drug, including dizziness and rarely asthma which rapidly yielded to treatment. The drug, which accumulated in the fatty tissues, had been used over long periods in cattle without reports of any untoward effects.

6.46 Several Donors referred to the EAC recommendation, based on the results of epidemiological research, that full larviciding should be maintained for 14 years in the Extension areas in order to meet the Programme objective and wondered whether it would involve extending the Programme beyond 1997 up till 2004, since in some areas full larviciding would begin only in 1990. The Chairman of EAC said that the purpose of the recommendation was to ensure that once the disease had ceased to be a public health and socioeconomic problem there could be no recrudescence. That implied also continued efforts to find an effective macrofilaricide, the development of means of differentiating human and animal onchocerciae and research on new insecticides. The WHO Legal Counsel said that if operations were to be continued beyond 1997, negotiations would have to be conducted at that time and new agreements signed along the lines of those at present in force.

#### Aerial operations

6.47 In reply to a Donor's expression of concern at the rapid turnover of pilots, it was pointed out that flying and living conditions were much less attractive in the OCP area than in other areas, such as the North Sea offshore oilfields, and that fewer pilots were now available. The new contracts to come into force in January 1990 were designed to ensure better continuity. Salaries, bonuses and leave would be improved and more recreational facilities would be made available in the work area.

#### Training

6.48 The representative of a Donor Country stressed that if the Programme's achievements were to be sustained after it had come to an end, it was essential to train not only epidemiologists but also managers and other categories of staff. Such training should preferably be carried out in Africa not only in order to acquaint trainees with the actual conditions of their future work but also to reduce the brain drain. It was pointed out in reply that out of the 300 people trained so far under OCP fellowship, only 2 (both trained in Europe) had not returned to work for their governments.

6.49 In response to the representative of a Donor Country, it was stated that only 8 of the 300 people trained so far were women - five ophthalmologists, two parasitologists and a health economist. Governments of the Participating Countries were urged to put forward more women candidates. The representative of a contributing Agency considered that the question was one rather for governments than for OCP.

6.50 In reply to the representative of another Donor Country, it was promised that next year's Progress Report would give more details of the return of OCP-trained staff to work for their respective governments. OCP did not always pay for the training given. For instance, Guinean staff being trained for ivermectin distribution were being paid by the Government of that country.

Cooperation between OCP and various programmes at WHO HQ

6.51 The representative of a Donor Country raised the question of cooperation between OCP and other sections of WHO whose work had a direct bearing on the Programme's activities. A representative of TDR said that over the years cooperation with OCP had been very successful. There was cross-membership of the TDR Steering Committee on Filariasis and the OCT Steering Committee. Collaboration on preclinical drug development and the search for a macrofilaricide had been particularly close and had cut costs considerably. Other areas of common interest were the development of immunodiagnostic tools that would enable the prepatent diagnosis of infection in children and the early detection of recrudescence. Serum samples from the OCP area were used by TDR in the development of monoclonal antibodies and various antigens. At a recent meeting of molecular biologists at Heidelberg University, an agreement had been reached for the testing of some of those antigens in the field. TDR was also contributing greatly to the development of DNA probes that would help inter alia to differentiate between human and animal onchocerae. It was hoped to make OCT/TDR cooperation still closer in line with the EAC's recommendations.

6.52 The Director of Vector Biology and Control at WHO headquarters said that VBC was responsible for the WHO Pesticide Evaluation Scheme, which worked through 12 collaborating centres, of which one was the OCP itself. VBC had so far passed on for testing one insect growth regulator, five pyrethroids and one organophosphorus compound.

6.53 The Acting Director of the Parasitic Diseases Programme said that OCP was a very valuable resource when other control activities were being planned, particularly in view of its extensive database and its experience of working with the local populations.

Secondary environmental effects

6.54 The representative of a Donor Country drew attention to the call at the opening session for more attention to be paid to the secondary environmental effects that might result from the very success of the Programme's activities, such as the clearance of vegetation and soil erosion in resettled areas. At its ninth session the Ecological Group had recommended that additional research work should be conducted and funded by other organizations, particularly in the Western Extension area. His Government would be prepared to support studies on the life-cycles of invertebrates, the recolonization of treated areas by a limited number of taxonomic groups and the presence of certain types of riverine vegetation and certain groups of aquatic fauna, and also to support the training of national biological monitoring teams to improve their capabilities. The suggestions were welcomed with thanks by the Chairman of the Ecological Group, who invited other governments to make similar proposals.

7. PROGRESS REPORT OF THE ONCHOCERCIASIS CHEMOTHERAPY PROJECT (OCT)  
FOR 1989: Agenda item 8 (document JPC.10.5)

7.1 The Manager of OCT, introducing his report, recalled the way in which compounds were currently developed as potential antifilarial agents. Initially, in a joint programme with TDR/Filariasis, compounds were tested for activity in killing adult worms, without toxicity for the host, in rodent and dog models of filarial infections - the primary and secondary screening systems. Successful compounds then proceeded to more specific tests for activity against lymphatic filariasis and onchocerciasis, comprising for OCT early in vitro testing against adult Onchocerca gutturosa and O. volvulus, followed by the preparation of the large quantities of the compound needed for testing against O. gibsoni in cattle. If compounds showed good activity and low toxicity, they could then be selected for preclinical toxicological studies. If they proved safe, they could be tested under hospital conditions, first in uninfected volunteers and then in lightly infected patients.

7.2 The Wellcome Research Laboratories had been asked to concentrate on developing an active series of aminotetramisoles and phenylamidines but the two promising compounds singled out, 276C and 38C, proved inactive and unacceptably toxic when tested in dogs and cattle and it was therefore agreed to terminate the work in June 1989.

7.3 Two compounds from Ciba-Geigy had been undergoing clinical trials, CGP 6140 for onchocerciasis and CGP 20376 for lymphatic filariasis; they were now known under the generic names of amocarcine and metobethiamide respectively.

7.4 The nodules from OCT-funded trials in Ghana and Mali, had still not been analysed by Ciba-Geigy in relation to amocarcine, the company having concentrated on its own independent trials of the compound on 300 patients in Guatemala and Ecuador, based on a schedule of two oral doses twice a day for three consecutive days. OCT would await the results of those multiple-dose trials before taking any decision on developing the drug as a possible macrofilaricide for community therapy.

7.5 When with TDR support, the other compound, metobethiamide, had been subjected to Phase I dose-ranging studies in volunteers in India, it had been found that at higher doses it had a reversible toxic effect on the liver, so that further one-month toxicological studies in the rat, dog and baboon had to be carried out by Ciba-Geigy. The results were currently being examined by an independent toxicologist. The drug had shown a good macrofilaricidal effect on O. volvulus in cattle and microfilaricidal activity in a group of patients lightly infected with Bancroftian filariasis, who were being followed up for one year. A decision on its future as a potential macrofilaricide for human onchocerciasis would be taken as soon as the toxicologist's findings and its clinical effects on Wuchereria bancrofti were known.

7.6 Ciba-Geigy had also agreed to carry out at no cost to OCT, preclinical toxicological and metabolic studies on a promising compound, CGI 18041. Such studies would have cost OCT US \$1.2 million at market rates. Protocols would be drawn up in January 1990 for Phase I clinical trials in volunteers and Phase II clinical trials in infected patients; such trials would probably be started before the end of 1990, if no problems were found.

7.7 Ciba-Geigy had also agreed to conduct acute toxicity trials free of charge on four related benzothiazoles and benzoxazoles that had proved active against O. gibsoni in cattle, with a view to selecting the compound with the best therapeutic index and the least toxicity.

7.8 Clinical trials were under way in Ghana in which a clinically acceptable dose of albendazole (a registered anthelmintic compound) would be given in combination with the normal 150 ug/kg dose of ivermectin in the hope that the synergy of the two drugs would permanently affect embryogenesis in the adult female worm and possibly kill it.

7.9 It was proving more difficult than expected to find the additional primary screening centre that was needed in view of the increasing number of compounds entering the screens.

7.10 In full collaboration with TDR, efforts were also being made to find companies able to store, weigh and ship experimental compounds to the screening laboratories, since the facilities in Geneva were inadequate.

7.11 The Office of the WHO Legal Counsel had sought in recent months to obtain specimens of legal agreements used by other laboratories to solicit the supply of novel compounds for antiparasitic and antitumour testing, with a view to making collaborative agreements more attractive to drug suppliers, particularly in the early stages.

#### Future OCT operations

7.12 In the report on its meeting of June 1989, the EAC had again emphasized the high priority that must be given to developing an operationally convenient macrofilaricide and the need to continue the search beyond the previously specified date of 1991, since even after termination of the Programme a proven macrofilaricide would still be needed to deal with any recrudescence of onchocerciasis. The EAC report, noting the good cooperation between OCT and TDR/Filariasis, asked OCP in collaboration with Director, TDR, to submit a scientific plan for macrofilaricide discovery and development to EAC at its eleventh session in June 1990, together with suggestions for financial support. The CSA Terms of Reference for an External Review had also called for further consideration of the progress of OCT.

7.13 The OCT's major concern was to be able to continue to support projects or groups without too many shifts in policy or in the availability of resources, given the generally accepted fact that at least ten years were needed to develop a drug.

7.14 However, early in 1988 OCT had been advised, in view of the 1991 deadline for discovering candidate compounds for clinical trials, to terminate all fundamental research on determining novel drug targets. Yet most chemical series from the pharmaceutical industry were targeted at specific biological receptors and enzymes. Fundamental research was therefore essential to single out such targets in Onchocerca, especially if they were also of interest to the industry for commercial reasons. Successful collaboration depended on a mutual awareness of areas that needed investigation and an interchange of information on pharmacological targets and the drugs that acted on them.

The financing of OCT

7.15 The registration of ivermectin in 1987, together with the elimination of basic research in 1988 and the termination of contracts with the two multidisciplinary research groups in industry, had dramatically reduced costs, to about US \$1.6 million per annum for 1988/89. In addition, preclinical development costs for current clinical trial candidates had so far been shouldered by Ciba-Geigy. As had been pointed out, complete toxicological studies on one compound alone would have cost US \$1.2 million at market prices. If OCT had to bear those costs, annual expenditure would increase very considerably. Those considerations should be borne in mind when attempts were made to estimate the cost of continuing a chemotherapy programme for OCP beyond 1991.

7.16 A representative of EAC stressed that the development of a macrofilaricide that could be conveniently used under rural conditions in Africa should have the highest priority, since at a stroke it would enable the Programme not only to eliminate the adult parasite reservoir in onchocerciasis, thereby making the fourteen years' larviciding at present needed unnecessary, but also allow for combating the lymphatic filariases that affected hundreds of millions of people throughout the world. EAC had been impressed by the OCT/TDR cooperation in the search for such an operationally convenient macrofilaricide.

7.17 The development of ivermectin had been a spin-off from the search by pharmaceutical companies for an effective drug against gastrointestinal nematodes in the veterinary field. Very little screening was done by the industry on filariases other than those of veterinary importance. The current approach to evaluation of a macrofilaricide was to determine its effect on the worm histologically, and given the wide age range of worms taken from a single human nodule to specifically identify drug damage was a difficult task. Immunodiagnostic methods needed to be developed for evaluating the effect of drugs on the adult worm. In order to give the pharmaceutical companies and the Preclinical Drug Development Team some leads in the search for a suitable drug, focused basic research was needed to identify unique biochemical pathways in the parasite.

7.18 In the view of EAC the mandate given to OCT to find an operationally convenient macrofilaricide by 1991 had been unrealistic. Ivermectin development for onchocerciasis treatment had taken six years and even that had been remarkably fast. However long it took to develop a macrofilaricide, it would still be extremely valuable as a means of controlling recrudescence of the disease.

7.19 EAC wished to congratulate OCT on its efforts to date and to express its gratitude to Ciba-Geigy for undertaking at its own expense the toxicological tests that were needed. The development of a macrofilaricide should not be looked upon as a short-term goal. Even if it were not successful till the turn of the century, it would still be of immense importance for arresting any recrudescence and eliminating the need for further vector control operations.

8. DEVOLUTION: Agenda item 9 (documents JPC10.7(A) and JPC 10.7(B))

8.1 The Programme Director said that devolution was now a matter for the Participating Countries supported by OCP and the WHO Regional Office for Africa. As had been decided at the eighth session of the JPC in Rome, the role of OCP would be to determine technological needs, to provide technical support, and to train national staff to carry out the tasks that would devolve on them.

8.2 The Coordinator, Office of the Programme Director, said that various meetings had been held which had touched on the problem of devolution. At the Sub-Regional Committee meeting held in Bamako from 27 February to 3 March Member States had stressed the need for integrating onchocerciasis control activities into the activities of the health services, strengthening those services, training national staff and improving information systems. The responsibilities that would devolve on the Sub-Region after the Programme came to an end were emphasized. The thirteenth meeting of the National Onchocerciasis Committees (NOC) held in Ouagadougou in June 1989 had provided an opportunity for discussing with the responsible staff from Benin, Côte d'Ivoire, Ghana and Togo the framework for their devolution plans which were to be drawn up in 1990. An important meeting had been held in Brazzaville from 31 October to 3 November 1989; under the able guidance of the WHO Regional Director for Africa it had discussed the definition, justification and advantages of devolution, the institutional framework in which it would be carried out, the activities and resources that would be required at different levels in the countries' health systems and the roles to be played by AFRO and OCP respectively.

8.3 In Burkina Faso, whose devolution plan had been approved at the ninth session of the JPC, work had begun immediately, in collaboration with OCP, on training the health workers active in the areas formerly affected by onchocerciasis, carrying out epidemiological evaluation and distributing ivermectin wherever required. The rural communities were participating in the devolution process by drawing the attention of the authorities to any significant changes in the entomological situation. Moreover, in response to the wish expressed by the Donors at their conference in October 1989, Burkina Faso had indicated its own contribution to the costs of carrying out its devolution plan.

8.4 The Programme had also cooperated with Mali and Niger in the elaboration of their devolution plans (documents JPC10.7(A) and JPC10.7(B)), which would be introduced by the delegate responsible in each case.

8.5 Since the introduction of ivermectin, 323 people had been trained in the field by OCP in epidemiological evaluation, ivermectin distribution and post-administration monitoring. As for formal training, 302 persons from the Participating Countries had been given OCP study fellowships in disciplines directly relevant to onchocerciasis control. Ten nurses from Mali and Niger were attending courses on epidemiology at Mali's National School of Medicine and Pharmacy in Bamako.

8.6 In addition the Programme Director was studying with certain governments and training institutions ways and means of strengthening the training institutions so that they could train senior staff in epidemiology, as had been requested by certain Donors and experts from the Participating Countries.

8.7 A representative of the World Bank expressed satisfaction with the progress made with devolution and devolution plans during the year. The key technical requirements for devolution had become very clear - epidemiological surveillance and treatment with ivermectin. The cooperation of the Participating Countries had developed smoothly. Discussions with them had shown that obviously maintenance of onchocerciasis control had to be anchored in the national health systems. The ways in which that should be done required further thought.

### Discussion

8.8 The representative of the WHO Regional Office for Africa stressed that integration of residual onchocerciasis activities into primary health care implied the dynamic and responsible participation of the population as a whole, not merely of health personnel. The key factors at local level were community participation, collaboration between all health-related sectors and the application of affordable technologies by trained members of the local (district) health team. Technical support should be provided by the intermediate-level health services, while the central authorities would be responsible for policy decisions and plans of action. Local authorities would carry out entomological and epidemiological surveillance, ivermectin treatment and focal larviciding if it should prove necessary. It was important to ensure that even after the end of the Programme there should be an intercountry mechanism for technical cooperation and coordination between the Participating Countries, and WHO would play an important part in that. AFRO would cooperate with Participating Countries in formulating their national devolution plans. In those health districts that were already operational, ivermectin distribution could serve as a model for devolution activities as a whole.

8.9 The representative of a Participating Country in which the work of NGOs in the health sector is regulated by the Ministry of Health as part of a coordinated national health structure, suggested that devolution activities should be integrated with control of schistosomiasis, trypanosomiasis and other diseases and conducted by each country's peripheral health units and NGOs, under strict supervision from the intermediate and central authorities so as to avoid overlapping and reduce costs. With efficient organization each team could deal with all the disease control activities during a single visit to a village.

8.10 The representative of Burkina Faso reported on the preliminary devolutionary activities already undertaken. Trypanosomiasis and onchocerciasis control activities had been amalgamated, the population even in the most remote villages were taking part in entomological surveillance, and all health professionals had been given some training in onchocerciasis control. One hundred and ninety-five people had been trained in cooperation with OCP and twelve teams were already working in two regions. However, more financial support from Donors and technical cooperation from WHO would be needed to make devolution a complete success.

8.11 The representative of one of the two countries submitting devolution plans, Niger, was happy to report that onchocerciasis control operations had been so spectacularly successful that not a single child born since they were instituted had been found to be infected and considerable spontaneous settlement was occurring in the cleared areas. However, the human reservoir of onchocerciasis persisted and strict surveillance would be necessary to detect and arrest any recrudescence. Onchocerciasis control coupled with leprosy control would be merged into primary health care activities in the local health units. Skin-snip surveys, based on the methods described in a manual prepared by OCP, would be used to detect new cases of onchocerciasis and it had been decided to use the individual files and the treatment analysis systems developed by the Programme; OCP would cooperate in running the database and training staff. Whenever new cases were detected, epidemiological maps would be drawn up on the basis of skin-snip surveys in the villages surrounding the indicator village. In the event of renewed transmission, ivermectin would be distributed by the village health teams, whose tasks also included enhancing public awareness of the disease, its consequences and the countermeasures needed.

8.12 Training of personnel, the strengthening of facilities and the provision of financial support would be necessary for success. Not enough qualified epidemiologists, ophthalmologists, parasitologists and laboratory technicians were at present available. The cost of the programme of activities in the first five years of devolution was calculated at some US \$1 620 000. The devolution process would begin in 1990.

8.13 In the other country that submitted a plan for its devolution zone, Mali, the objective was to prevent any recrudescence of onchocerciasis, to assess the prevalence of sleeping sickness, map its area of distribution and institute parasite and vector control programmes, and to provide local health posts with the necessary resources to combat blinding diseases and blindness, enabling them to provide effective eye care for 80% of patients.

8.14 The national disease surveillance system, both at the centre and locally, would be responsible for epidemiological surveillance and onchocerciasis control. The district health centres would implement the main activities of devolution, including administration of ivermectin to detected cases and mass ivermectin campaigns in the front-line villages and any other villages found to be infected.

8.15 Training would be needed for the personnel concerned with epidemiological surveys and examinations and with the distribution of ivermectin, including the monitoring of its possible side-effects. It would be necessary to train four epidemiological experts and three medical entomologists. The total cost of the five-year devolution plan was estimated at some 2.7 million United States dollars.

8.16 The representatives of a Contributing Agency and of several Donor Countries emphasized the need for devolutionary activities to be sustainable in the long-term. That would require inter alia continuing and strong commitment by WHO/AFRO. In that connection they asked for a more concrete explanation of what was being, would be, and should be done by AFRO in building-up the health infrastructure in the OCP area and of what the actual status was of the health districts which the Regional Office representative had described as "operational". If a detailed answer could not be given immediately, WHO/AFRO could be asked to submit a comprehensive report the following year.

8.17 It was also important that the Participating Countries should maintain an integrated approach to devolution problems. If any one of them failed to sustain its efforts, all of them would suffer.

8.18 The representative of a Donor Country asked the two countries which had presented devolution plans to be launched in 1990 what success they had had so far in attracting funds and what role they envisaged for NGOs in their plans. The representative of another Donor Country asked what were the national governments' contributions to those plans, whether they could be given an annual cost breakdown for each element in the plans and what was to happen at the end of the five years. Evaluation should always cover the question of sustainability.

8.19 The representative of a Donor Country also wished to know what arrangements there were for reaching remote areas, to carry out ivermectin distribution for instance.

8.20 The representative of WHO/AFRO undertook to circulate a document explaining how the development committees set-up in each district would determine the health activities needed, in collaboration with the district health committees and the district health services. Operational plans could then be drawn-up, including plans for activities connected with devolution. The Regional Office would be happy to submit to the next JPC a report on its activities in connection with devolution.

8.21 On the financial side the Regional Office had already made US \$500 000 available and the Participating Countries had pledged 5% of the regular budget for health district management; part of that could obviously be set aside for activities connected with devolution.

8.22 The representative of a Contributing Agency pointed out that operational plans were not the same as operations; presumably the report to be submitted by AFRO the following year would provide more concrete details.

8.23 In reply to questions on access to remote areas for devolution activities, it was stated that in Niger there were some 800 village health workers in the zones concerned who could be used to distribute ivermectin under regular supervision at arrondissement level by nurses, or even by doctors when they were available. Mali was using light mobile teams to reach remote areas and carry out both epidemiological and entomological surveillance in cooperation with the local population. Reporting depended largely on the use of two-way radios.

8.24 As for the financing of devolution, Niger had had no offers for the moment but was in contact with friendly institutions and countries. Mali had received some US \$30 000 for laboratory supplies to be used in trypanosomiasis control, which was being amalgamated with onchocerciasis control in the Malian health services. More bilateral aid was being solicited and the Committee of Sponsoring Agencies had been asked to help Mali find sources of funds.

8.25 The representative of the African Development Bank suggested that when the Bank sent missions to Participating Countries to study the strengthening of the health services, those missions should always be asked to integrate devolution requirements into their plans.

8.26 The representative of a Participating Country, speaking later, during the discussion on socioeconomic development said, on behalf of the National Onchocerciasis Committees, that strengthening the health infrastructure and the training of technical personnel were of capital importance. Under devolution it would be prudent to integrate with residual onchocerciasis control activities measures to control only a limited number of other diseases, such as malaria, schistosomiasis, trypanosomiasis and dracunculiasis. Training for devolution should be given in African institutions. Establishment of an Institute of Tropical Epidemiology in Africa should be envisaged.

8.27 Devolution could not succeed unless the thorny question of funding were solved. The three pioneer countries had still not found committed donors to finance devolution and the situation would be still worse when the four other countries entered the lists. The Participating Countries had therefore asked OCP to make the CSA aware of the need for financial support for national devolution plans.

8.28 The Programme Director expressed his satisfaction with the full and frank discussion of a very important issue. Good progress was being made and the Committee could rest assured that every single Participating Country was utterly committed to making sure that onchocerciasis never came back.

9. REPORT OF THE EXTERNAL AUDITOR: Agenda item 10 (document JPC10.6)

9.1 The External Auditor had examined the Status of Funds Statement and Annexes of the Onchocerciasis Control Programme and found them to be in order.

9.2 The External Auditor had recommended that the authority of the Director to adjust allocations within the approved budget should be defined, and an appropriate mechanism was outlined in the Plan of Action and Budget for 1990 (document JPC10.4) for consideration by JPC under agenda item 11.

9.3 The audit team had appreciated the ready cooperation given by the Director of the Programme and his staff in both Ouagadougou and Geneva.

9.4 The Director of the Programme expressed his gratitude for the continued cooperation of both external and internal auditors. Their financial advice to the Programme had been invaluable.

9.5 JPC noted the report of the External Auditor.

10. PLAN OF ACTION AND BUDGET FOR 1990 AND ITS APPROVAL: Agenda item 11 (document JPC10.4)

10.1 The Chief of Administration and Management said that the proposed budget for 1990, the penultimate budget of the third Financial Phase, showed no major change in direction. JPC was asked to approve a budget of US\$ 30 770 000, which represented a decrease of 4.4% compared to the budget approved for 1989.

10.2 Following a recommendation from the External Auditor, CSA proposed that any impending transfer of more than 10% for any one Programme activity authorized by JPC be referred to the Chairman of CSA for approval. Such a mechanism would improve the flexibility of OCP operations by allowing a transfer of funds between Programme activities, while not affecting the overall budget total.

10.3 Personnel costs absorbed around one third of the annual budget and continued to rise despite a reduction in staff of 25% from 1987 to 1989 and a further 6% to 1990. As agreed by JPC at its ninth session, the annual 20% salary supplement paid by OCP to national teams working in the Western Extension area would be replaced from 1 January 1990 by a system of monthly bonuses essentially based on effective performance and the level of responsibility.

10.4 Despite staff reduction and better controls, increased operational travel necessitated by ivermectin distribution and enlarged vector control operations would increase costs by 5.2%. Costs of aerial operations would decrease slightly thanks to an overall reduction in required aircraft hours. The total requirement for larvicides took account of the need to maintain stocks but also showed a slight reduction. Other operating costs showed slight increases.

10.5 The proposed budget had been prepared on the basis of an exchange rate of CFA 338 to one US dollar.

Discussion

10.6 The Chief of Administration and Management said that, for each country in the Western Extension area, staff lists had been drawn up and bonus payments worked out on the basis of functions discharged, the degree of responsibility, the actual tasks undertaken, the cost of living, current salary and travel or other conditions of work undertaken for OCP.

10.7 In reply to a question from the representative of a Donor Country, the Legal Counsel confirmed that the new contract for aerial operations, with the same contractor as in the previous contract, had been prepared in accordance with WHO procedures. It had been signed and would take effect on 1 January 1990, and included clauses that obliged the contractor to make contractual arrangements with pilots and other key personnel to assure the organizational continuity of services during the annual critical peak operational period. Guaranteed hours would be paid regardless of whether or not they were actually flown and at a different tariff from non-guaranteed hours, which would only be paid if flown.

10.8 In reply to questions from representatives of Donor Countries regarding increases in staff salaries, it was explained that OCP was obliged to follow the decisions taken at the United Nations General Assembly. In addition to the recent high increase in general service salaries, it appeared likely that an increase in professional salaries of around 5% would be agreed soon and might take effect during 1990, in which case the increased costs would have to be absorbed within the proposed budget.

10.9 In answer to a request for further information on experience with United Nations volunteers, the Programme Director said that careful selection and briefing could improve their usefulness. He would give a more detailed report on the issue at the next session of JPC.

10.10 A representative of a Donor Country noted that the position of women in OCP was not very encouraging and hoped that Participating Countries would persuade more good women candidates to come forward.

10.11 Responding to a request for further information on the overall and per capita costs of ivermectin distribution, the Programme Director said that OCP was in the process of moving from a period of field trials to mass distribution of the drug, and that detailed costs would be worked out during 1990. The precise costing was of crucial importance for devolution.

10.12 In reply to a question from the representative of a Participating Country it was explained that although no specific provision for applied research and environmental monitoring was listed in the budget document those activities were continuing as part of the programmes of the Vector Control and Epidemiological Evaluation units.

10.13 The Programme Director agreed with the representative of a Donor Country that it would be appropriate to include in the progress report and the Plan of Action and Budget more information on collaboration with countries outside the OCP area. In addition to assisting in staff training, OCP made its research data and operational results freely available to all those interested.

10.14 A Donor representative noted that, as in OCP, personnel costs represented a high proportion of the costs of any ministry of health - costs that were unavoidable and had to be found by the Participating Countries. Requests for assistance for devolution were therefore largely focused on the mobilization of funds to ensure that those personnel had the other resources they needed to carry out their work.

10.15 JPC approved the referral of any impending transfer of more than 10% for any one Programme activity to the Chairman of CSA for approval.

10.16 The Plan of Action and Budget of US \$30 770 000 for 1990 was approved.

11. FINANCING OF THE ONCHOCERCIASIS CONTROL PROGRAMME: Agenda item 12

11.1 The representative of the World Bank reported that financing available to OCP for the six-year period 1986-1991 was now projected to be US \$171 million. Total expenditures under the modified Plan of Operations were estimated at US \$180 million. Therefore the projected financial shortfall for the remainder of the third Financial Phase was US \$9 million.

11.2 Additional financial support pledged by long-standing and new Donors had reduced the projected deficit by 75% since 1987, and the prospects for securing the remaining funding were encouraging. However, Donors would need to finalize their commitments soon if the Programme's activities for the remainder of the Phase were to be completed successfully.

11.3 Revised expenditure estimates included the following additional costs: (1) US \$7 million for an extension of chemotherapy research; (2) US \$18 million resulting from the decline in the value of the US dollar since 1985; (3) US \$17 million to combat blackfly resistance; and (4) US \$5 million for field-testing and distribution of ivermectin.

11.4 Despite the higher expenditures for the third Phase, OCP remained extremely cost-effective. Average costs were less than one US dollar per person protected per year over the life of the Programme and considerably less if the additional years of protection expected after the Programme ended were taken into account. Annual expenditures for OCP were expected to peak during the current phase and to decline gradually throughout the remainder of the Programme.

11.5 The projected shortfall of US \$9 million was based on the continuing assumption that a contingency reserve of US \$10 million would be maintained for the remainder of the third Phase, to allow for unforeseen emergencies and to cover the period of financial uncertainty in the transition from the current Phase into the fourth Phase.

11.6 As in the past two years, additional funding was being sought in two ways, from current Donors and through the recruitment of new Donors. The response had been encouraging; 12 of the 19 Donors involved at the start of the third Phase had agreed to make additional contributions and four new Donors had joined the Programme since 1987. Representatives of three new Donors, the Calouste Gulbenkian Foundation, the Grand Duchy of Luxembourg and the Republic of Korea were participating in JPC meeting for the first time.

11.7 Supplemental contributions to close the bulk of the remaining deficit had been requested from selected Donors. Overcoming the shortfall was vital since failure to achieve a major goal of the third Phase of bringing all the Western Extension area under active control, would undermine the basic objective of the Programme, which could prove far more costly in the long-term. It was also important for the continuity of OCP as preparations for the fourth Phase began.

11.8 The shortfall would necessitate the continuation of the strict financial discipline enforced successfully by OCP since 1987.

11.9 As pledged in 1988, the World Bank would maintain its contribution at the higher level of US \$2.5 million per year in 1990 and 1991, increasing its total contribution for the third Phase to US \$14.5 million.

11.10 The representative of UNDP confirmed that its original pledge of US \$7.5 million for 1987-1991 would be honoured. UNDP was also providing US \$1 million to finance the Land Settlement Study. While there were no additional resources available for the remainder of the third Phase, UNDP hoped to continue its support during the fourth Phase.

11.11 The representative of the United Kingdom of Great Britain and Northern Ireland said that its contribution would be maintained at the same level as in 1989, £900 000. It was hoped to make a similar contribution in 1991.

11.12 The representative of the United States of America said that his country would continue its contribution at US \$2.5 million and, as in 1989, would provide an additional US \$2.5 million, bringing its total contribution for 1990 to US \$5 million.

11.13 The representative of Switzerland confirmed her country's pledge to provide Sw.fr.20.5 million for the third Phase. Its contribution for 1990 would be US \$2 million.

11.14 The representative of Norway confirmed that its contribution for the remainder of the third Phase would be as pledged, amounting to a total of 18 million Norwegian Kroner. An additional contribution of 4 million Norwegian Kroner would be made available for 1990, subject to parliamentary approval, bringing the total contribution for the year to 5 million Norwegian Kroner.

11.15 The representative of the Republic of Korea said it had made an initial contribution during 1989, the year it had joined the Programme. His Government had the intention of continuing to contribute according to the country's means.

11.16 The representative of Japan said that his country had contributed US\$ 2.2 million in 1989 and would continue to support the Programme in 1990.

11.17 The representative of the Calouste Gulbenkian Foundation said that its contribution for 1989 had amounted to US \$75 000. He was hopeful of a favourable response for 1990.

11.18 The representative of the Federal Republic of Germany confirmed that his country's contribution for the second half of the third Phase would be DM 6.82 million and an additional contribution would be considered. His country was also interested in making a contribution to the proposed external evaluation, possibly by providing and funding a member of the evaluation team.

11.19 The representative of France said that arrangements for the payment of its contribution of F.fr. 45 million had been modified so that its annual contribution could be made available at an earlier stage.

11.20 The representative of the Commission of European Communities said that its contribution to the third Phase was ECU 6 million and a request for an additional US \$4 million was under consideration. However, contributions were related to the European Development Fund and the Lome Conventions and most of the funds available from the Sixth European Development Fund had already been committed. Favourable consideration would be given to support for the financing of the fourth Phase.

11.21 The representative of the United Kingdom of Great Britain and Northern Ireland said that, as a Member State, his country would support favourable consideration by the Commission of European Communities for additional funding for the third Phase of OCP and for the continued funding of OCP operations from the Seventh European Development Fund and hoped that other Member States who were also Donors to the Programme would do likewise.

11.22 The representative of Canada said that his Government hoped to maintain its contribution at existing levels for the remainder of the third Phase.

11.23 The representative of Belgium announced a pledge for 1989 and 1990 of B.fr. 35 million, or an increase of B.fr. 7 million in each year above her Government's contribution for 1988.

11.24 The representative of the African Development Bank said that it would maintain its total contribution of about 1.68 million units of account paid at 280 000 units of account per year.

11.25 The representative of the Netherlands recalled that its total contribution for the third Phase was 30 million Guilders. His Government would contribute an additional US \$25 000 for the financing of the proposed external evaluation.

11.26 The representative of Saudi Arabia announced that its contribution for 1990 would remain at US \$2 million.

11.27 In reference to the new technical information indicating that larviciding would need to be continued for a total of 14 years to ensure lasting control and that ivermectin alone could not interrupt transmission, the Programme Director said that if the Programme were not continued for the required duration, recrudescence was likely to occur and the money spent so far would have been wasted. The representative of the World Bank said that OCP was just beginning to prepare its Plan of Operations for the fourth Financial Phase, which covered the period 1992-1997.

11.28 In reply to a question from the representative of a Donor Country, the representative of the World Bank said that covering the estimated shortfall from the contingency reserve would be a possible option but would entail a substantial risk that funds would be insufficient to meet any unforeseen emergencies. The contingency reserve was also essential to ensure an adequate cash-flow, as many of the annual contributions were only paid during the second half of each year.

11.29 The representative of the World Bank said that following the round of pledges four Donors had announced increases for the remainder of the third Phase, totalling an additional US \$3.5 million. The shortfall had therefore been reduced to US \$5.5 million. The continued support of the Donor Community was most encouraging.

11.30 Before the consideration of the final communiqué, the representative of the Netherlands took pleasure in announcing that his Government would contribute an additional 2 million Guilders for the financing of the third Phase of the Programme.

11.31 It was announced that the projected shortfall for the remainder of the third Phase had therefore been reduced to approximately US \$4.5 million.

12. SOCIOECONOMIC DEVELOPMENT: Agenda item 13 (documents JPC10/INF/Doc. 2 and JPC10/INF/Doc. 4)

12.1 Introducing the agenda item on socioeconomic development, a representative of the Committee of Sponsoring Agencies said that of the two regional studies decided upon at the eighth session of the JPC in Accra one had been completed. Its recommendations, contained in the "Hunting Report", had been discussed at the 1989 National Onchocerciasis Committees meeting in Ouagadougou and in individual consultations with the Participating Countries.

12.2 The second study, the "Land Settlement" review, had begun in December 1988. It was being financed by UNDP and carried out by the Institute for Development Anthropology in cooperation with institutions in the Participating Countries. Its objective was to determine the factors that would contribute to sustainable development in resettlement areas in the Participating Countries. After field study of numerous settlement sites in the Participating Countries, particularly Burkina Faso, Ghana, Mali and Togo, guidelines would be drawn up for settlement-related activities. Those guidelines would lay special stress on the role of women in settlement and on the steps needed to alleviate any adverse consequences for the environment that might arise from settlement in the areas where onchocerciasis was under control.

12.3 The final report, which was due at the end of April 1990, would describe the various types of settlement visited, compare their effects, list settlement-related problems that might require further study, and formulate recommendations and operational guidelines for interventions in regard to settlements in the future, with special attention to the management of spontaneous settlement, the promotion of rational development in settlement areas and the monitoring of the social, economic and environmental effects of settlement.

12.4 During 1989 the CSA had sent consultation missions to Côte d'Ivoire, Sierra Leone and Guinea and would send one to Guinea-Bissau in the first half of 1990. The objective of the missions was to discuss country-specific aspects of the socioeconomic development programme for inclusion in the national onchocerciasis zone development studies proposed by the Hunting Report.

12.5 Environmental action plans had been drawn up for Burkina Faso, Ghana and Guinea that drew heavily on important work being done under the Tropical Forestry Action Plan (TFAP) and the national conservation strategies supported by the International Union for Conservation of Nature and Natural Resources (IUCN). They provided a framework for taking environmental considerations into account in countries' overall economic and social development programmes.

12.6 The socioeconomic programme was progressing well as a result of the collaboration between the Participating Countries and the Donors. A stage was being reached when it would be up to the Participating Countries to introduce follow-up proposals in consultations on assistance. The CSA would be prepared to cooperate with each Participating Country as appropriate during that post-preparatory phase.

12.7 The Chief of the Socioeconomic Development unit of OCP said that the National Onchocerciasis Committees, at their thirteenth session in Ouagadougou in June 1989, had delegated Togo to report to the JPC on their deliberations. He simply wished to recall that the Participating Countries had emphasized on many occasions that in each country it was the ministries responsible for development - the Ministry of Planning, the Ministry for Rural Development or the Ministry of Agriculture - that must assume responsibility for socioeconomic development in the areas freed of onchocerciasis. Consequently, each Participating Country had sent to the thirteenth NOC session a representative of such a ministry. The discussion had centred on the Hunting Report, particularly as concerned the problems raised by the relative isolation of the onchocerciasis-freed zones and the need to develop agriculture and stock-raising and to protect the environment in the settlement areas. The countries had opted for integrated schemes of development.

12.8 The Participating Countries had also discussed matters for which they thought that a common solution should be found, particularly in regard to financing the socioeconomic development of the onchocerciasis-freed zones; they believed that the CSA should continue to play the role of guide and mentor in the search for sources of funds. Another common problem discussed had been the control of migratory movements where in-depth studies are needed.

12.9 The representative of Togo, speaking as rapporteur of the thirteenth session of National Onchocerciasis Committees, said that the success of onchocerciasis control had already had important economic repercussions. Resettlement of the freed areas had reached almost uncontrollable proportions in some regions and an enormous productive potential had been released, particularly in agriculture, forestry and mining.

12.10 Exploitation of the freed territories, however, was hampered by the absence of the infrastructure needed, particularly in regard to feeder roads and bridges, water supply, health services, education and marketing. The Participating Countries had therefore agreed at their Bamako meeting in 1987 to include in the National Onchocerciasis Committees representatives of the technical ministries concerned with those aspects of development.

12.11 Strategies were needed that were based on self-sufficiency in food, increased animal and fish production, the growing of export crops and the rational use of water resources; the encroachment of the desert must be halted by means of reafforestation; the best possible use must be made of local raw materials.

12.12 The Committee felt that OCP should continue to act as a link between Participating Countries and Donors, to promote in collaboration with other institutions specific studies designed to help the countries take rational decisions in regard to their socioeconomic development and to undertake certain activities jointly.

12.13 At their Ouagadougou meeting in 1989 the Participating Countries had accepted in general, despite certain shortcomings in them, the preparatory country studies on the development of the areas freed from onchocerciasis. In some cases more detailed studies were already in progress.

12.14 In view of the need for integrated development programmes in the areas now free of onchocerciasis and of the lack of adequate infrastructures already mentioned, the Participating Countries were unanimous in requesting all the participants in OCP to help them find the necessary funding for the infrastructure projects that were needed.

12.15 It was felt that more comprehensive and detailed studies of migratory flows were needed if environmental problems were to be avoided and decent conditions of settlement ensured. The Land Settlement Review would probably contribute to a solution. In any case, protection of the environment must in future be part and parcel of all schemes for developing the onchocerciasis-freed areas.

12.16 The overriding concern of all the Participating Countries was to find sources of funds for devolution and socioeconomic development, which were no longer the responsibility of OCP. The Participating Countries have to rely on bilateral negotiations with potential donors and called upon CSA to assist them in this respect. The Committee also recognized the importance of appropriate NGOs and recommended that closer cooperation be fostered.

12.17 The representative of the Food and Agriculture Organization of the United Nations (FAO) said that his agency was primarily concerned with agricultural development and the social well-being of the rural populations, particularly in regard to food production and nutrition. Although its direct contribution to OCP was limited, its technical support for small projects concerned with the prevention of food losses, the promotion of women's role in development, small-scale food processing schemes, crop storage and crop diversification, to name but a few, and for a number of large-scale projects, such as the FAO/Italy project in Burkina Faso and several UNDP projects in which it was the executing agency, involved the expenditure of millions of dollars. Estimates of the areas under development in the mid-eighties in the onchocerciasis-freed areas, at 160 000 km<sup>2</sup> were over double the 1973 forecast. The international community was actively cooperating with the Participating Countries in socioeconomic development. In Togo alone at least twelve different Donors were working alongside the Government. However, much further investment would be needed. The NOCs had a very important role to play in ensuring interministerial cooperation. FAO would continue to do its utmost through technical advice and support to promote the socioeconomic development of the freed areas.

12.18 The representative of a Participating Country considered that the Hunting Report had only skimmed the surface of the problem. In the Land Settlement Study his own country had not been covered. Such studies should cover all the countries concerned and the governments concerned should participate in them. In the meantime, in his country 40 000 hectares had already been resettled spontaneously by the population, which did not wait for the results of the studies. His government was proceeding with a whole series of projects with its own funds and funds obtained from a number of donors, to a total of some 11 000 million CFA francs. What was needed, however, was a fully integrated overall development project that paid due attention to environmental problems.

12.19 The representative of a Donor Country said that his country would be very interested in taking part in the proposed seminar to discuss the final report on the Land Settlement Review when it appeared. Under bilateral agreements his government was already supporting schemes of reforestation, integrated rural development and primary health care in many of the Participating Countries and would reinforce its participation in the European Communities' programme for strengthening district health systems.

12.20 The representative of a Donor Agency remarked that there was often a lack of communication on funding matters between the Ministries of Health and the ministry or ministries responsible for planning and finance, which were the only ones with the authority to request funds from external sources.

12.21 The representative of the World Bank assured the representative of the Participating Country that what was happening in his country would certainly be covered in the Land Settlement Review, which would also cover the adverse effects on the environment of uncontrolled resettlement of onchocerciasis-freed areas. In reply to the representative of a Donor Country, it was unfortunately impossible at the present stage to make known any of the conclusions of the review, the report not having been completed.

12.22 The representatives of three Participating Countries pointed out that the membership of the NOCs had been enlarged specifically to take into account the need to associate the ministries responsible for finance and planning with the process of obtaining funds for devolution and socioeconomic development. What took an inordinate time was the whole cycle of prefeasibility studies, feasibility studies, etc. Meanwhile, uncontrolled resettlement might be going on, with adverse effects on the environment.

13. OTHER MATTERS

Draft Terms of Reference for an external review of the Onchocerciasis Control Programme: Agenda item 14.1 (document JPC10.9)

13.1 A representative of CSA recalled that, at its ninth session, JPC had suggested that an external review of the Programme, undertaken at the end of the third Financial Phase, would be helpful in preparation for the fourth Phase. In consultation with Donor Countries, CSA had prepared draft Terms of Reference for such a review, which took account of the valuable evaluation work already undertaken by EAC.

13.2 CSA considered that the review should be broad-based and should look to the future, taking into account the factors that had made OCP successful and focusing on devolution, promotion of socioeconomic development in onchocerciasis-controlled areas and the long-term impact of the Programme on health development in the Participating Countries.

13.3 CSA would be willing to assume responsibility for organizing a team of consultants to conduct the review and to coordinate their activities. The team would be selected as early as possible in 1990 from candidates proposed by JPC members in accordance with the profiles described in the draft Terms of Reference. The timetable envisaged that the final report would be submitted for consideration at the eleventh session of JPC.

13.4 The cost of the review was estimated at US \$250 000-300 000 and would be met by voluntary contributions. The bulk of the financing had already been secured from interested Donors.

13.5 CSA believed that the review would be useful for discussions on the fourth Phase of the Programme.

13.6 The majority of representatives of Donor Countries favoured an external review and endorsed the draft Terms of Reference in principle. It was hoped that both Participating and Donor Countries would propose suitable candidates for the review team.

13.7 A representative of the World Bank said that in order to ensure that the results of the review would be available in time for the preparations for the fourth Phase, it was envisaged that candidates would be proposed by the middle of January 1990 and that a team would be selected soon afterwards to start work in April-May 1990. The final report would be submitted to JPC for consideration at its eleventh session. The review would cover the eleven countries covered by the Programme. It was hoped to brief JPC members on the workplan, which would include a meeting with EAC.

13.8 JPC agreed that the draft Terms of Reference should be amended to ensure that the evaluation would address the future direction of the Programme, giving particular emphasis to devolution, socioeconomic development and the protection of the environment following resettlement in onchocerciasis-controlled areas. The possibilities for further collaboration with other international agencies working in the region, such as OCCGE, should also be examined.

13.9 JPC agreed that an external review of the Programme should be undertaken in accordance with the Terms of Reference as amended and the proposed timetable.

13.10 The representative of Canada announced that his country would contribute Canadian \$50 000 to the external review.

13.11 The representative of the United States of America said that his country would contribute US \$150 000 to the external review.

13.12 The representative of France said that his country would give favourable consideration to financial support for the external review.

13.13 The representative of the Netherlands recalled that his country had agreed to contribute US \$25 000 to the external review.

13.14 The representative of the Federal Republic of Germany recalled that his Government was willing to fund a member of the review team.

#### Statement on the O-Now! Symposium

13.15 Professor H.J. Van der Kaay presented the conclusions and recommendations of the O-Now! Symposium on Onchocerciasis, held from 20 to 22 September 1989 in Leiden, Netherlands, which had focused on recent developments and prospects for control of the disease. The symposium had attracted 175 participants covering all disciplines relevant to onchocerciasis control. The full proceedings would be published in 1990.

#### Publicity material

13.16 JPC appreciated the initiative of the Programme in producing a mobile exhibit, posters and a revised brochure to publicize its objectives, activities and achievements.

14. DATE AND PLACE OF THE ELEVENTH SESSION: Agenda item 15

14.1 The representative of Guinea formally confirmed his Government's invitation to JPC to hold its eleventh session in that country.

14.2 JPC accepted the invitation with thanks and agreed to hold the eleventh session in Conakry, Guinea from 3 to 6 December 1990.

14.3 JPC noted with appreciation the invitation from the Government of the Kingdom of Saudi Arabia to hold the twelfth session of JPC in Riyadh in December 1991.

15. FINAL COMMUNIQUE

15.1 JPC adopted the following final communiqué:

#### FINAL COMMUNIQUE

1. The Joint Programme Committee (JPC) of the Onchocerciasis Control Programme in West Africa (OCP) held its tenth session in the Ministry of Foreign Affairs, The Hague, during 4-7 December 1989. The African Development Bank, Belgium, Benin, Burkina Faso, Calouste Gulbenkian Foundation, Canada, Commission of European Communities, Côte d'Ivoire, France, Germany (Federal Republic of), Ghana, Guinea, Guinea-Bissau, Italy, Japan, Luxembourg, Mali, Netherlands, Niger, Norway, Republic of Korea, Saudi Arabia, Senegal, Sierra Leone, Switzerland, Togo, United Kingdom and United States of America were represented as members, as were the Sponsoring Agencies - FAO, UNDP, the World Bank and WHO.

Members of the Expert Advisory Committee (EAC) and of the Ecological Group attended as *ex officio* members. Representatives of the French Institute of Scientific Research for Development through Cooperation (ORSTOM) and the Mectizan Expert Committee were present as observers.

2. The Minister of Health of Senegal chaired the proceedings until the election of Mr I.M. de Jong (Netherlands) and Dr M. Sylla (Guinea) as Chairman and Vice-Chairman, respectively.

3. The Deputy Director-General for International Cooperation of the Netherlands' Ministry of Foreign Affairs, welcomed delegates on behalf of the Government and people of the Netherlands.

4. In the message he addressed to the JPC, Dr Hiroshi Nakajima, Director-General of WHO, again recalled that the foundation for the success of the OCP was the long and exemplary collaboration between the Participating Countries and the Donor Community.

5. The Director of the WHO Regional Office for Africa (AFRO), Dr G.L. Monekosso, stated that onchocerciasis control constituted a major preoccupation of the Regional Office.

6. In presenting the WHO Progress Report, the Programme Director and his collaborators announced that, despite the year's heavy rainfall, the Programme had attained its objectives as planned.

7. The Expert Advisory Committee (EAC) confirmed that the execution of the Programme's modified plan of operations was in accordance with its technical, scientific and ecological recommendations. Taking into account the experience of the past fifteen years and the results of various studies, the EAC recommended that the OCP should continue with aerial larviciding in the extension areas for a total of fourteen years, if Programme objectives were to be attained. The JPC noted this recommendation.

8. The OCP will continue the financing of the Onchocerciasis Chemotherapy Project (OCT) over the period 1989-1991. While acknowledging the important role to be played by ivermectin in onchocerciasis morbidity control, the JPC considered the development of an effective macrofilaricide, either before or after the end of OCP, as being crucial, and stressed that adequate funding for this purpose should be ensured.

9. Once again, devolution was the subject of in-depth discussion. The draft plans for devolution of Mali and of Niger were presented and approved, as that of Burkina Faso had been the previous year. The JPC looked forward to the report that WHO/AFRO had agreed to present to the next session of the JPC on its participation in devolution.

10. The JPC noted the report of the External Auditor.

11. The JPC approved the draft Plan of Action and Budget for the 1990 fiscal year, amounting to US \$30 770 000. To ensure sufficient flexibility for OCP operations, JPC endorsed the referral of any impending transfer of more than 10% for any one Programme activity to the Chairman of the CSA for approval.

12. Following pledges by the OCP Donors, the representative of the World Bank reported that the financial shortfall projected for the remainder of Phase III had been reduced from US \$9 million to US \$4.5 million.

13. Representatives of the CSA reported on the progress made in socioeconomic development activities and on the regional development studies it had been asked to carry out by the JPC. The urgency of assistance in developing socioeconomic structures in the resettled river basin areas was underlined. Socioeconomic development should be part and parcel of the national planning process and due regard should be paid to the protection of the environment.

14. The representative of Togo presented a summary of the recommendations of the thirteenth meeting of the National Onchocerciasis Committees.

15. The draft Terms of Reference for an external review of the OCP were discussed and adopted. It was felt that the review, which would be finished in time for the eleventh session of the JPC, would provide a useful basis for future discussions on Phase IV of the Programme. Full consideration should be given to the ecological implications of resettlement in the onchocerciasis-controlled areas.

16. The JPC expressed its appreciation to the Government of the Netherlands for the warm hospitality extended to it and for the excellent arrangements which had been made to hold this tenth session in The Hague.

17. The JPC accepted with thanks the kind invitation of the Government of the Republic of Guinea to hold the eleventh session of the JPC in Conakry from 3 to 6 December 1990. It noted with appreciation the kind invitation from the Government of the Kingdom of Saudi Arabia to host the twelfth session of the JPC in Riyadh in December 1991.

#### 16. CLOSURE OF THE TENTH SESSION

16.1 The representative of a Participating Country thanked the people and Government of the Netherlands for the warm hospitality shown to all the participants and for the excellent conditions provided for their deliberations. She also thanked the Donors and the Committee of Sponsoring Agencies for their unflinching support.

16.2 The session closed with renewed thanks to the Government and People of the Netherlands for their warm hospitality, and with the customary exchange of courtesies.

ANNEX I

AGENDA

1. Opening of the session
2. Election of Officers
3. Adoption of the agenda
4. Adoption of the report of the ninth session of the Joint Programme Committee
5. Reflections of the Committee of Sponsoring Agencies
6. Progress report of the World Health Organization for 1989
7. Report of the Expert Advisory Committee
8. Progress report on Onchocerciasis Chemotherapy Project
9. Devolution
10. Audit report
11. Plan of Action and Budget of the Programme for 1990 and its approval
12. Financing of the Onchocerciasis Control Programme
13. Socioeconomic Development
14. Other matters
15. Date and place of the eleventh session
16. Closure of the tenth session

ANNEX II

LIST OF PARTICIPANTS

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ANNEX III

Subject to Audit

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT  
AS ADMINISTRATOR OF THE SPECIAL ACCOUNT FOR THE  
ONCHOCERCIASIS CONTROL PROGRAMME (PHASE III)  
STATEMENT OF CASH RECEIPTS, DISBURSEMENTS AND ACCOUNT BALANCE  
(Expressed in United States dollars)

	Year ended December 31, 1989	January 1, 1986 Inception to December 31, 1989
<u>Receipts:</u>		
<u>Contributions</u>		
African Development Bank	\$ 761 309	\$ 1 492 431
Belgium	709 669	2 126 562
Canada	1 403 061	5 516 944
European Economic Community	-	6 772 972
Finland	291 545	1 162 896
France	1 206 952	3 948 327
Germany, Federal Republic of	1 638 299	5 725 341
Gulbenkian Foundation	75 000	75 000
International Bank for Reconstruction & Development	2 500 000	9 500 000
Italy	2 500 000	4 460 000
Japan	2 200 000	7 300 000
Korea	60 000	60 000
Kuwait	-	2 500 000
Luxembourg	218 425	218 425
Netherlands	2 314 547	12 312 588
Norway	750 699	2 875 267
OPEC Fund for International Development	-	150 000
Saudi Arabia	-	6 000 000
Switzerland	4 500 000	11 472 495
United Kingdom	2 089 735	4 803 173
United Nations Development Programme	1 500 000	6 750 000
United States	5 000 000	13 500 000
World Health Organization	-	1 500 000
	<u>29 719 241</u>	<u>110 222 421</u>
Income from Investments	2 306 709	6 822 527
Balance from Phase II	-	22 594 373
 Total receipts	 <u>32 025 950</u>	 <u>139 639 321</u>
<u>Disbursements:</u>		
Transfers to World Health Organization as executing agency <sup>1</sup>	<u>44 100 000</u>	<u>121 100 000</u>
Excess of (disbursements) receipts	\$( <u>12 074 050</u> )	\$ <u>18 539 321</u>
Represented by cash and investments		\$ <u>18 539 321</u>

<sup>1</sup>Due to an operational error in fund transfer at the end of 1988, the fourth quarter transfer to WHO, in the amount of \$16 000 000, which was initiated in early December was not paid until early January 1989.