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<tr>
<td>AfDB</td>
<td>African Development Bank</td>
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<td>APOC</td>
<td>African Programme for Onchocerciasis Control</td>
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<td>ATO</td>
<td>Annual Treatment Objective</td>
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<td>AWOL</td>
<td>Anti-Wolbachia</td>
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<td>BCC</td>
<td>Behavioral Change and Communication</td>
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<td>CBO</td>
<td>Community-Based Organisation</td>
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<td>CDD</td>
<td>Community-Directed Distributor</td>
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<td>CDI</td>
<td>Community-Directed Intervention</td>
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<td>CDTI</td>
<td>Community-Directed Treatment with Ivermectin</td>
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<td>CMFL</td>
<td>Community Microfilarial Load</td>
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<td>CSM</td>
<td>Community Self Monitoring</td>
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<td>DOLF</td>
<td>Death to Onchocerciasis and Lymphatic Filariasis</td>
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<td>HKI</td>
<td>Helen Keller International</td>
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<td>DEC</td>
<td>Diethylcarbamazine</td>
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<td>FLHF</td>
<td>Front Line Health Facility</td>
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<td>GAELF</td>
<td>Global Alliance for Elimination of Lymphatic Filariasis</td>
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<tr>
<td>GPELF</td>
<td>Global Programme for Elimination of Lymphatic Filariasis</td>
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<tr>
<td>HR</td>
<td>Human Resource</td>
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<tr>
<td>HSAM</td>
<td>Health Education Sensitisation Advocacy Mobilisation</td>
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<td>HQ</td>
<td>Headquarters</td>
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<tr>
<td>HW</td>
<td>Health worker</td>
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<tr>
<td>IEC</td>
<td>Information, Education, Communication</td>
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<td>IPM</td>
<td>Independent Participatory Monitoring</td>
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<td>JAF</td>
<td>Joint Action Forum</td>
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<td>LF</td>
<td>Lymphatic Filariasis</td>
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<td>LGA</td>
<td>Local Government Area (in Nigeria)</td>
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<td>LTS</td>
<td>Lohmann Therapy Systems</td>
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<td>MDA</td>
<td>Mass Drug Administration</td>
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<td>MDGH</td>
<td>Medicines Development for Global Health</td>
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<td>MDP</td>
<td>Mectizan® Donation Program</td>
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<td>MF</td>
<td>Microfilaria</td>
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<td>MOH</td>
<td>Ministry of Health</td>
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<td>MOHSW</td>
<td>Ministry of Health and Social Welfare</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>NGDO</td>
<td>Non-Governmental Development Organization</td>
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<td>NOCP</td>
<td>National Onchocerciasis Control Programme</td>
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<td>NOTF</td>
<td>National Onchocerciasis Task-Force</td>
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<td>NTD</td>
<td>Neglected Tropical Diseases</td>
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<td>PAB</td>
<td>Plan of Action and Budget</td>
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<td>PC</td>
<td>Preventive Chemotherapy Treatment</td>
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<td>PHC</td>
<td>Primary Health Care</td>
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<td>RAPLOA</td>
<td>Rapid assessment procedure of <em>Loa loa</em></td>
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<td>RPRG</td>
<td>Regional Programme Reporting Group (LF)</td>
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<td>SAE</td>
<td>Severe Adverse Events</td>
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<td>SCI</td>
<td>Special Country Initiative</td>
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<td>SHM</td>
<td>Stake Holder Meeting</td>
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<td>SS</td>
<td>Sightsavers</td>
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<td>Transmission Assessment Survey (LF)</td>
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<td>Technical Consultative Committee (of APOC)</td>
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<td>TOVA</td>
<td>The Onchocerciasis Vaccine for Africa</td>
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<td>UTG</td>
<td>Ultimate Treatment Goal</td>
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<td>VAS</td>
<td>Vitamin A Supplementation</td>
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<td>WHO/AFRO</td>
<td>WHO Regional Office for Africa</td>
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<td>WHO/NTD</td>
<td>Neglected Tropical Diseases – Department within WHO cluster of communicable diseases (WHO/NTD)</td>
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OPENING: Agenda Item 1

1. The 40th session of the Technical Consultative Committee (TCC) of APOC took place in Ouagadougou from 09 to 13 March 2015. The Chair of the Committee, Prof Mamoun Homeida welcomed all participants and indicated that it was probably going to be the last formal TCC meeting. He indicated that since the last meeting many changes and major decisions have been taken by the partners, particularly the decision taken by JAF to close APOC, while the replacement has not been visualized, especially that the PENDA programme has not been considered. He raised the worry that all the benefits and gains reaped through APOC activities may be lost. He emphasised that the TCC being an independent Committee should voice out its views and concerns in closing APOC without structuring a replacement to cater for the gains and successes. He suggested that as a technical body, TCC should make its views known to all partners and make them public, and send a warning to all that elimination has to be pursued, managed through a continent wide programme. Bilateral funds may leave some countries underfunded which will harm the objectives of the continent wide-elimination. He suggested that an urgent letter be written by TCC, sent to all bodies concerned and published to make the TCC’s views heard. More so, he suggested that a group meet to write up a paper on the great achievements of APOC on the elimination and the risk of recrudescence of oncho if no action is taken.

2. The Director of APOC, Dr Jean-Baptiste Roungou, also welcomed all participants to Ouagadougou. He briefly mentioned the outcomes of the decisions of the 148th and 149th sessions of the CSA, as well as that of the JAF20 that took place in Addis Ababa. He informed the TCC that, according to the information, discussion papers were developed by WHO and a stakeholders meeting took place in London during which AFRO presented four scenarios, all of which were rejected by partners who wanted a smaller independent entity that will be using the normative power of WHO. He informed TCC that the stakeholders meeting which was to hold in Johannesburg had been postponed.

3. The Director also informed TCC on the budget constraints the Programme is currently facing, explaining that the US$ 25 million approved by JAF was to be released by the Fiscal Agent. However, at the CSA meeting of June 2014, the Fiscal Agent asked to consider an annual budget of US$ 19 million for 2014 and 2015. Finally, at JAF20 in Addis Ababa, the Management was informed that only US$15 million was available and that there were pledges of 5.6 million from few partners. The Director explained that unlike in previous years where the totality of the annual budget is transferred to APOC once the Final Communiqué is approved, this year only 10 million out of the 19 million had been made available so far. While the Programme was planning to disburse 60% of that amount for Programme activities and 40% for staff salaries, instructions were received to prioritize salaries till December 2015. It was when the new Regional Director was briefed during her just ended visit in Burkina Faso on 7th March 2015, that she instructed the Management to use 50% of that money for activities and 50% for salaries, hoping that the Fiscal Agent would disburse the remaining nine million by June 2015. Dr Roungou therefore indicated that TCC40 might be the last session of the technical committee. In this regard, he suggested that two to three members of the committee be appointed to write the completion report of the TCC and encouraged the committee to proceed in playing their technical roles as the chair indicated.

4. Following the opening remarks, a minute of silence was observed for the demise on 8 February 2015 of Mr André Nikiéma, one of APOC committed interpreters, who used to cover all TCC sessions and other meetings organized by APOC till his passing away.
5. On these opening remarks followed the introduction of participants, the list of whom is appended as annex 1.

ADOPTION OF THE AGENDA: AGENDA Item 2

6. The Agenda was adopted with slight amendment. A copy is appended as annex 2.

INFORMATION

MATTERS ARISING FROM CSA 148TH AND 149TH SESSIONS CSA AND JAF20, including the closure of APOC: Agenda Items 3, 4 and 5

7. Dr Chris Mwikisa, Manager, Corporate Services of APOC, presented a summary of matters arising from 148th and 149th sessions of the Committee of Sponsoring Agencies (CSA) as well as JAF20 that took place in Addis Addis Ababa, indicating that the situation during CSA148 and 149 as well as JAF20 and now is completely different. During CSA148, it was sure that PENDA will come to be and at CSA149 there was a road map which CSA was mandated to follow. But now there is no hope of having PENDA. As a former Chair of the CSA who also played a directorship roles at WHO/AFRO Headquarters, he gave many examples which led to the current situation, one of them was the non-reaction of the countries during decision making stages in JAF sessions.

8. On the closure of APOC, Dr Mwikisa said that JAF decision was clear, APOC should close but continue with activities. WHO was to address matters related to staff management, applying WHO rules on separation of staff. He estimated the cost for the separation of all staff to be 23 million US dollars, which gives a shortfall of 10-20 million that WHO will need to find. He further wonders how a programme could be closing and at the same time carrying out activities as usual.

9. Regarding the creation of the new entity, further to the statement of the Director of APOC in his opening remarks, Dr Mwikisa indicated that following the London meeting with partners where there was a confusion, the meeting planned in South African could not hold; therefore the new entity was no longer relevant. Hence, APOC will close but there will be no new entity to take over immediately. In a nutshell, two main decisions came out clearly, viz, (i) APOC to close, and (ii) the preparation of the final evaluation of the Programme.

10. It was however indicated that during the recent visit of the Regional Director in Burkina Faso, she indicated that she will resume consultation with the countries and the partners on the creation of the new entity.

TCC Comments:

11. TCC expressed its deep sadness on the current situation of APOC, especially on the way the closure of the Programme is handled, a Programme that has been very successful, particularly achieving more than 90% of its goals. The committee feared that more than 40 years of struggle to get rid of the scourge of river blindness might end up in resurgence of the disease in the present scenario.

12. After a long brainstorming, the committee as an independent scientific body, decided to make its views known to the international bodies, based on scientific basis. The committee therefore decided to:
i) Write an open letter to stakeholders making its scientific views known to the public. The letter should be technical with scientific evidence. A group was formed to prepare such a letter;

ii) Prepare a technical report on the activities of the TCC from the onset for publication;

iii) Brief the highest authorities (Ministers) thoroughly on the gravity of the situation, emphasising the possible recrudescence of onchocerciasis if the present scenario persists. The Ministers should also be encouraged to provide funds from in country sources for use in completing the elimination of onchocerciasis;

iv) Contacts with Ministers should be made before the Regional Director’s meeting with partners on the creation of the new entity;

v) Stakeholders should also be approached for support.

13. Following the above decision, the sub-committee appointed by TCC met and prepared two letters, one addressed to the Ministers of Health of Onchocerciasis endemic countries, and the other one to be published in the Lancet. These two letters were reviewed at plenary session, agreed upon and signed by all TCC members attending the 40th session.

TCC: FOLLOW UP OF KEY RECOMMENDATIONS OF THE THIRTY-NINTH SESSION: Agenda Item 7

14. Prof Sidi Eli Ahmedou presented a summary of the status of implementation of the TCC39 recommendations. The full text is appended as annex 3.

15. TCC thanked Prof Ahmedou for the presentation and APOC Management for actions taken. The committee observed that since it was the last TCC and APOC will be closing on 31st December 2015, some of the actions were no more relevant.

STRATEGIC AND TECHNICAL ISSUES

ELIMINATION OF ONCHOCERCIASIS INFECTION AND INTERRUPTION OF TRANSMISSION: Agenda item 8

(i) Elimination of Onchocerciasis with ivermectin in Africa:

a) Progress made towards stopping treatment.

16. The results of comprehensive analysis of epidemiological evaluation that were conducted between 2008 and 2014 were presented by Dr Afework Tekle. Pre-and post-control burden of Onchocerciasis in Africa was presented, including the results of phase 1a and phase 1b epidemiological evaluations. Some of the sites presented showed impressive reduction in microfilaria prevalence rate for a number of countries and also unsatisfactory results for some countries. Based on the findings of the evaluation, sites were categorized into four categories, namely: sites close to
elimination, sites on track but need to treat for some time, sites on track but need intensification of intervention to meet the 2025 target, and sites with unsatisfactory results.

17. This year’s comprehensive analysis also take into consideration the comparison of ONCHOSIM prediction with the observed epidemiological evaluation results and a statistical test was performed to see if the difference was statistically significant. The test takes into consideration the different errors and variability in the ONCHOSIM modelling and estimation of mf prevalence by converting the REMO nodule prevalence rate.

18. Status of National elimination of Onchocerciasis in Africa was reviewed and next steps were also outlined in those countries where elimination has probably been achieved. These countries include the Ex-OCP countries: Senegal, Mali, Niger, Guinea Bissau, Togo and Benin; the APOC countries: Burundi, Chad and Malawi stand out. If the planned confirmatory evaluation is completed in 2015, there is a possibility of stopping more than 15 million treatments in 9 countries in Africa by 2016 and 2017.

19. The analysis also showed that post-treatment prevalence of 22 sites (39%) was as predicted by ONCHOSIM and are on track; while 15 sites (27%) and 10 sites (18%) showed prevalence close to elimination and probably achieved elimination and the rest 9 (16%) showed prevalence higher than predicted which is unsatisfactory for the number of years they had treatment.

20. Some of the challenges encountered by the programme are: financial constraints, conflict areas in some countries, loa loa co-endemicity, and insufficient technical capacity in some countries with poor performance, Ebola virus disease outbreak and Cross-Border issues for elimination. Other challenges encountered are unavailability of entomological information to stop treatment, co-infection of LF in some sites, difficulty of pinpointing the real cause of poor performing sites, financial constraint to implement some of the planned 2014 and 2015 epidemiological and entomological evaluations and poor cross-border collaboration.

21. As a way forward, the programme is to undertake the following before its sunset by December 2015: Documentation of the status of onchocerciasis by country, entomological and epidemiological evaluations, support countries in evidence based decision making and confirm oncho elimination and provide guidance on Alternative Treatment Strategy (ATS) in problematic areas.

TCC comment:

22. TCC thanked Dr Afework Tekle for the presentation and congratulated APOC Management and the countries for the excellent achievement. The committee observed that in looking at the epidemiological evaluation in general, the results are much better than predicted by the models, based on pre-control Onchocerciasis prevalence. The committee also noted that some countries such as Burundi, Chad and Malawi are showing very good nationwide epidemiological evaluation results.

23. The committee therefore recommended, to conduct entomological transmission assessment survey in 2015 to ascertain the situation in the vectors, if funds allow.

24. The committee also encouraged APOC management to publish results of epidemiological evaluations and that the results be also used to prepare a documentation in epidemiological situation country by country.
b) Update on the potential of nodule palpation for epidemiological evaluation

25. An update was presented on the potential of nodule palpation as a rapid assessment method for onchocerciasis infection. The prevalence of palpable nodules has been used effectively in REMO to identify meso and hyperendemic areas where CDTi was needed to control the disease as a public health problem. In the context of elimination, APOC now needs a rapid assessment method for mapping low prevalence areas and for phase 1 epidemiological evaluations after ivermectin treatment. In order to generate the data to assess the potential of nodule palpation in such areas, TCC recommended that APOC includes nodule palpation in all epidemiological evaluations. This has resulted in comparative data on nodule and mf prevalence for 107 villages from untreated areas and from phase 1 evaluations in 442 CDTi villages. The analysis of these data was presented to TCC.

26. In the untreated areas that were surveyed, the prevalence of mf was generally low or zero. There was a fair agreement between the prevalence of nodules and mf and 93% of the 89 villages with nodule prevalence <5% also had a prevalence of mf <5%. The new data for low endemic areas provide a good complement to the original dataset of 104 meso and hyperendemic villages that was previously used to quantify the relationship between the prevalence of mf and the prevalence of nodules (Coffeng et al, 2013). A nonparametric regression curve fitted to the combined dataset was similar to the previous curve by Coffeng et al.

27. The relationship between mf and nodule prevalence after ivermectin treatment has not yet been quantified. Longitudinal data for 15 OCP villages showed that after 10 years of vector control, the decline in prevalence of nodules was much slower than the decline in the prevalence of mf. The current analysis showed a completely different pattern after several years of ivermectin treatment, with the prevalence of nodules declining much faster than after vector control, and showing even a faster decline than the prevalence of mf. The prevalence of nodules was a fair indicator of the prevalence of mf. Of the 282 villages with a nodule prevalence of zero, 85% also had a mf prevalence equal to zero. For 94% of the 393 villages with a nodule prevalence <5%, the mf prevalence was also < 5%.

28. When the results were used to classify projects, 25 of the 33 evaluated projects received the same classification of zero or very low infection levels (<2%) by both nodule prevalence and mf prevalence. It is concluded that nodule prevalence has considerable potential as a rapid assessment method for mapping in low endemic areas and for phase 1 evaluations of progress towards elimination in CDTi projects.

TCC comments:

29. TCC thanked Dr Remme for the presentation and the excellent job. The committee suggested that the results be used in the open letter that the committee is preparing.

c) Update on delineation of treatment boundaries

30. An update on the delineation of treatment boundaries for the elimination of onchocerciasis was presented. Since 2013, surveys based on skin snip were conducted in 10 countries: Cameroon, Burundi, DRC, Chad, Equatorial Guinea, Gabon, Ethiopia, Tanzania, Côte d’Ivoire and Congo. Results from Ethiopia, DRC (Bandundu, Sud-Kivu Maniema), Tanzania, Côte d’Ivoire and Congo, which were not yet reviewed by previous sessions of TCC were presented.
31. In Ethiopia, all villages had microfilariae prevalence of 0%, apart from 4 villages with prevalences ranging between 0.2% and 0.8%.

32. In Bandundu province in DRC where 16 villages were surveyed, 4 villages revealed prevalence higher than 10%, and treatment is considered to be extended in Boko, Kenge and Masi-Manimba health zones. In Maniema, province, out of 4 villages, 2 had mf prevalence greater than 39% and treatment is to be extended in 2 health zones (Kailo and Kalima).

33. In view of the possibility of stopping treatment in Burundi, 20 villages in the neighbouring district with Sud-Kivu province in DRC were surveyed and no individual harbouring mf of *O. volvulus* was found, confirming that treatment may be safely stopped in the western part of Burundi if the epidemiological and entomological criteria are met. Loiasis is endemic in Maniema and Sud-Kivu health zones where treatment is to be extended, and this should be taken into account in deciding on appropriate treatment strategy.

34. In Tanzania, at the border with the Rutana CDTI project area of Burundi, 9 villages surveyed showed 0% prevalence.

35. For Côte d’Ivoire, *O. volvulus* mf prevalence data for the period 1975 – 2013 is available. Ivermectin distribution history for onchocerciasis varies among districts from 2 to 17 annual treatment rounds. 37 villages were selected and surveyed in areas where there is no epidemiological information on the prevalence of onchocerciasis infection. 14 villages had infected individuals, one of them having reached 10% prevalence. All the positive villages are located in LF endemic areas where MDA has just been initiated in 2014 and will benefit from IVM +ALB treatment. The data available suggest that oncho may no longer be an issue in the Northern part of the country, and surveys are needed in order to decide on relevance of MDA.

36. Out of 28 villages surveyed in Congo, 4 had mf prevalence greater than 10%. Based on the results, the NOTF proposed a plan for extending the treatment in 3 administrative districts (Nyanga, Banda, Kibangou and Makabana). Loiasis is highly endemic in the extension areas, therefore alternative treatment strategy is to be used.

37. For 2015, APOC is planning to conduct surveys for the delineation of treatment boundaries in 14 countries: Chad (Salamat), Gabon, Nigeria, Equatorial Guinea, Mozambique, Angola, Congo, DRC (Bandundu, Katanga, Equateur, Sud-Kivu, Kasaï Oriental), Côte d’Ivoire, South Sudan, Sudan, CAR, Zambia and Namibia.

38. The main challenge for achieving the 2015 plan is the lack of funding. APOC is waiting to receive from WHO/AFRO funds from the BMGF for the mapping of oncho and Loiasis.

**TCC Comments:**

39. TCC thanked Mr Zoure for the presentation. On the issue of extending treatment to hypo-endemic areas in Congo Brazzaville, the committee recommended to exercise caution because of the endemicity of the area with loa loa. A thorough analysis has to be made before thinking of extending treatment to those areas.

40. On whether it was appropriate to map Zambia and Namibia, in the cross border regions because of budget constraints, the Management indicated that it is deemed necessary to carry out mapping in those regions of the five countries to ascertain that when there is elimination in
neighbouring DRC and Angola, there is no invasion from those countries. Moreover, BMGF funds available at AFRO will be used for such exercise. TCC therefore accepted that mapping is carried out in those countries.

41. On the use of parasitological survey for loa loa cut off, the committee observed that there is need for a protocol for that study.

   d) Update on entomological activities

   ➢ Delineation of transmission zones

42. Prof Daniel Boakye provided as an introduction to the update, a brief recapitulation of the essentials of the meeting on Guidelines for the certification of onchocerciasis elimination which was held in Geneva from the 8-9 January, 2015. The final recommendation places emphasis on entomological assessments for both stopping treatment in areas where transmission is suspected to have been interrupted as well as during the post-treatment phase. This background set the tone for the update, indicating the need to prioritize entomological evaluations for 2015.

43. The presentation highlighted that in 2014 a total of 13 countries (Malawi, Niger, Senegal, Mali, Chad, Burundi, North Gondar in Ethiopia, Gaderef Region in Sudan, five states of Northern Nigeria, Tanzania, Northern Cameroon, Togo and Benin) were earmarked to have some entomological activities done. However, due to the acute budget constraints activities were done in only five countries; Malawi, Niger, Senegal, Mali and North Gondar in Ethiopia.

44. In Malawi, Niger and Senegal, complete assessment was done including a search for productive *S. damnosum* s.l. breeding sites and selection of vector collection sites, training of technicians and vector collectors and vector collection. Samples for the whole transmission period of 5 months collection were received from Malawi and processed in the APOC Yankum Dadzie molecular biology lab. The results showed zero infection, indicating a higher probability that transmission has been interrupted in Malawi. A second year assessment is currently being undertaken in the country to confirm this observation and hence declare formally interruption in the country. In order to cater for possible infection from untreated areas in Mozambique, vector collection points around the border have been included in the 2015 evaluations. Partial samples have been received from Niger and Senegal and after processing, these have also indicated zero infection rates. The support of Sightsavers and RTI/Envision was acknowledged.

45. In Mali, Burundi and North Gondar, entomological activities undertaken included surveys for productive *S. damnosum* s.l. breeding sites and selection of possible vector collection sites. Training of technicians in transmission assessment have been done in Burundi and are planned in 2015 for Mali and North Gondar.

46. In 2015, second year transmission assessment will be done in Malawi (already started), Senegal and Niger with first year assessments planned for Mali, Burundi, North Gondar, Gaderef and Chad. If APOC funding situation improves, activities will be done in Northern Nigeria and Northern Cameroon.

**TCC comments:**

47. TCC was appreciative of the work done and indicated that priority be given to the entomological assessments for APOC to pronounce interruption of transmission and therefore
stopping CDTi in some countries before APOC closes at the end 2015. To this end, TCC recommended putting emphasis on activities in Malawi, Niger and Senegal while aiming to also have evaluations in Mali and Chad. Activities in the other countries should be as a second line of priority. The need to have extra support in the form of Temporary Advisors was also discussed.

- **Update on black flies trapping and other studies related to onchocerciasis transmission**

   48. Following the criticism about the ethical aspects of the use of human fly-catchers and the need of collecting enough fly for control and surveillance activities, research on alternative method to *S. damnosum* vectors collection are being carried out since 2011 by a consortium of institutes and institutions in the USA, Mexico and Africa (APOC). Prof T.R. Unnasch from the University of South Florida at Tampa is leading the consortium through a grant from the Bill & Melinda Gate Foundation. Dr Toe updated the TCC on this study, noting the progress made towards its use in the field, some of which are as follows:

   i) Comprehensive evaluations of trap platforms conducted for their ability to collect *Simulium damnosum* in Banfora (Burkina Faso) and in Chiapas (Mexico) were concluded by two publications in “Plos”. Different designs of traps are now adapted for Africa and Mexico. The Esperanza window trap has shown its efficacy in collecting flies in savannah and in the forest and savannah transition areas, with captures at least equal to the performance of the vector collector.

   ii) Studies have demonstrated that human olfactory compounds, when used in conjunction with CO2, have proven to be effective for collection of *S. damnosum*.

   iii) The group showed that the traps collect a fly population with the same age structure as that collected using human landing collections. Studies were carried out comparing parity rates in the trap and in parallel human landing collections performed over different times of the day and of the year to determine that similar segments of the population are sampled.

49. The team is interested in evaluating the optimized model in additional locations, where other species and cyto-species of *O. volvulus* vectors are found. Studies aiming at the development of a *S. damnosum* specific lure are undertaken. A trap that collects host-seeking vectors of *O. volvulus* in large numbers would provide the basis for replacing humans as bait in the monitoring and surveillance of onchocerciasis vectors.

50. Teams in Burkina Faso, Burundi, Ethiopia, Mali, Niger, Nigeria and Senegal received a theoretical and practical training. The objective of the training on the use of traps is to transfer the methodology of the trapping, to train the entomologists and the field teams’ members to collect flies for the surveillance and monitoring of onchocerciasis elimination in the endemic communities.

51. The research team plans to evaluate how a community could be responsible for the management of the trap to collect vectors for the surveillance and monitoring of onchocerciasis elimination, and report to the health system.

- **Predictive S. damnosum habitat modeling in Burkina Faso and Northern Uganda**

52. Dr Toe updated the TCC on the latest finding of the study. A move has been done from the primary model predicting *Simulium damnosum* breeding using images extracted of Quickbird with a resolution of 0.61 meter to images of Rapid Eye which are less precise (5m). 5m Rapid Eye model
reduces the cost by 100 fold. Rapid Eye model is 78% sensitive vs. the sensitivity of 100% for Quickbird model.

53. The study group, in collaboration with the National Onchocerciasis Control team of Burkina Faso is running an application of the new model for validation in Burkina Faso.

TCC comments:

54. TCC thanked Dr Toe for the presentations and the research team for the significant achievement and the scientific publications produced. The committee noted that making the traps available to countries will be a great achievement. The committee also noted the progress made in developing the trap and recognized its usefulness and the potential for using the trap as a control method. The countries should adopt the use of the trap as soon as it is ready. The committee therefore recommended the activity to continue, despite financial constraints. The committee also advised the team to collaborate with institutes and universities in the countries of implementation in order to avoid turnover of trained personnel.

(ii) Elimination of *O. volvulus* infection: New diagnostics of PATH

55. Ms Faulx presented the current status of the SD BIOLINE Onchocerciasis IgG4 rapid test, the product that was developed from the PATH Ov16 rapid test project. The Onchocerciasis IgG4 rapid test was launched in November of 2014 under the name “SD BIOLINE Onchocerciasis IgG4”. Following product launch, early introduction studies have begun in several countries including Togo, Nigeria and Cote d’Ivoire. PATH anticipates receiving data from these evaluations in the next few months. The Task Force for Global Health NTD-Support Center is also utilizing the test in upcoming diagnostic evaluations. PATH is facilitating the product on the market via seven mechanisms: ordering and shipment logistics; training support for the test; best practices for sample collection; laboratory reference testing support and standardized operating procedures; quality assurance program development; data analysis; and publication.

56. PATH is continuing with the development of a biplex test to detect IgG4 antibodies against *O. volvulus* antigen Ov16 and *W. bancrofti* antigen Wb123. PATH will perform a field evaluation of the diagnostic accuracy of the Ov16/Wb123 biplex test in Q3 of 2015. PATH is aware that specific questions regarding specificity still exist, particularly in areas with Loa loa co-infections. PATH is actively looking for partners and sites to conduct the field activities. Current timelines indicate that the test will be available in the first part of 2016. PATH is looking forward to continued collaboration with APOC and all partners as this work moves forward.

TCC comments:

57. On the question of the mechanism of ordering the SD BIOLINE Onchocerciasis IgG4 rapid test, the test is available for purchase via the Standard Diagnostics product catalogue. PATH is committed to support SD and parties interested in the test and appreciate all guidance on how to eliminate bottlenecks in the ordering process.

58. On the question of the test shelf life and stability, the SD BIOLINE Onchocerciasis IgG4 rapid test is able to be stored in ambient temperatures up to 40°C. There is no cold chain needed. Additionally, the shelf life for the test is 24 months from the date of manufacture.
59. On the question around the field activities of the Ov16 rapid test in Togo, the sampling strategy was school-aged children in a country-wide mapping activities of STH and schistosomiasis. The rapid test was included in this activity as an integration opportunity of onchocerciasis, STH and schistosomiasis. There are also dried blood spots being taken that will be used for ELISA reference testing for onchocerciasis (Ov16) and lymphatic filariasis (Wb123).

60. One the question of the study design for verification studies for the Ov16/Wb123 biplex test, PATH responded that the study is a diagnostic evaluation of performance of the biplex test. As such, there is a need for a certain number of true positives and true negatives for onchocerciasis and lymphatic filariasis. PATH and partners are currently identifying a number of sites that might be appropriate for this activity and will work with the selected partner(s) to develop an appropriate protocol for the evaluation.

61. TCC thanked PATH for the presentation and looked forward to the results of the ongoing evaluation studies of the OV16/Wb123 biplex test.

(iii) LF and Oncho elimination Programmes collaboration

62. Dr Nyamongo reported on the NTD-RPRG meeting which took place in Brazzaville from 17 to 20 February 2015. The meeting was attended by Programme managers, RPRG members, observers and the WHO Secretariat. APOC made presentation on its major achievements, e.g. disease mapping, ivermectin treatment and co-implementation, monitoring and evaluation.

63. In disease mapping, mapping of onchocerciasis had been largely completed throughout Africa for the purpose of control. However, with the shift from control to elimination, further delineation mapping of ivermectin treatment is underway since 2013. Mapping of loa using RAPLOA methodology had been finalized in 11 countries and both oncho and loasis maps were published and available for public reference.

64. In ivermectin treatment and co-implementation, there had been scaling-up that reached 80% of at risk population (107 million people treated in 2013), a number that will be surpassed treating one billion people cumulatively since the inception of the Programme.

65. In monitoring and evaluation, a summary of epidemiological and entomological evaluation results from 2008-2014 was presented showing significant elimination progress in APOC and ex-OCP countries.

66. Key constraints of APOC were also presented to the RPRG meeting. They are financial constraints, conflict areas in some countries, loa loa co-endemicity, and insufficient technical capacity in some countries with poor performance, Ebola virus disease outbreak and cross-border issues for elimination.

TCC comments:

67. TCC took note of presentation on the NTD-RPRG meeting and thanked Dr Nyamongo for the presentation.
(iv) Perspectives of Lymphatic Filariasis (LF) and Onchocerciasis elimination (DOLF)

68. Dr Boussinesq presented the last results of three studies conducted in the framework of the DOLF programme (Death to Onchocerciasis and Lymphatic Filariasis), funded by the Bill and Melinda Gates Foundation. The first study aimed at comparing the sensitivity of both rapid tests for the detection of circulating filarial antigens: ICT and Test Strip. Results from seven countries confirmed that the Test Strip is clearly more sensitive than the ICT. This means that if the ICT is replaced by the Test Strip during the transmission assessment surveys (TAS), the regions should have reached lower levels of infection before it is considered that stopping treatment is possible.

69. The second study is about community test conducted in the Democratic Republic of Congo whose aim is to determine whether biannual treatments with albendazole could lead to the elimination of lymphatic filariasis in areas where loiasis is coendemic. The prevalence of antigenemia and that of microfilariaemia, which had only decreased slightly one year after the beginning of the test (therefore after two treatments with albendazole), was, after four treatments, three times lower than the final values. These results show that the recommendations made by WHO-AFRO for the control of lymphatic filariasis in loiasis areas are probably well-founded. They should, however, be confirmed in another site in DRC where the endemicity levels of lymphatic filariasis are higher (evaluation at one year in June 2015).

70. The first study, conducted in Papua New Guinea, aims at determining whether a combined treatment with Diethylcarbamazine (DEC), albendazole (ALB), and ivermectin (IVM) is more efficient on lymphatic filariasis than the DEC+ALB combination. The results of a pilot phase, conducted on a small number of patients, show that all the subjects that received the tri-therapy were amicrofilaremic one to two years after the treatment, whereas these proportions were 0% and 33% in the group having received the DEC+ALB combination.

71. The adverse events were more frequent in the first group but they all disappeared 72 hours after the treatment. A larger scale test was started on the same site to confirm the excellent results of this protocol meant to facilitate the elimination of lymphatic filariasis in hard to reach regions or in the regions where treatments were started only recently. A similar study should be conducted in Côte d’Ivoire in a region where onchocerciasis is not endemic.

TCC comments:

TCC commended Dr Boussinesq for such interesting results. TCC, however, stated that the DEC could induce blinding ocular diseases in people infected by *O. volvulus* and that it was important to take all necessary precautions prior to using this medicine in Africa.

(v) Emodepside, a potential new treatment in development for onchocerciasis (DNDi)

72. DNDi is a collaborative, patients’ needs-driven, non-profit drug R&D organisation to develop new treatments against the most neglected communicable disease.

73. DNDi was established in 2003 with the engagement of seven founding partners, including MSF. By 2013, DNDi and its many partners have delivered six new treatments for malaria, human African trypanosomiasis, visceral leishmaniasis, and Chagas disease. The treatments are easy to use, affordable, and field adapted. DNDi does not have laboratories of its own, but rather works as a
product development partnership, with a wide range of collaborators involved in the projects, from academia and governments, to biotech and pharma industry.

74. The development of a macrofilaricidal was identified by DNDi as a priority to improve individual patient care, reduce the number of rounds of MDA required to break transmission, provide treatment in areas with Loa loa co-infection and accelerate progress towards elimination of both Lymphatic Filariasis and Onchocerciasis. The strategy followed by DNDi has three components: repurposing of drugs from human health applications through a programme of active screening of drug compounds; identification of drugs from animal health applications and determination of their suitability for development as a macrofilaricide for human use; and the assessment of new candidates to be brought into the drug development pipeline from pharmaceutical, biotechnology, and academic partners.

75. Compounds accessed from pharmaceutical companies are initially tested in vitro against Onchocerca parasites: microfilariae O. lienalis and adult worms O. gutturosa.

76. Active compounds are then evaluated in vivo in either jirds or mice naturally infected with L. sigmodontis. Following infection through mites, adult worms develop in the pleural cavity where microfilariae are released to make their way to blood circulation.

77. Emodepside is a drug commercialized by Bayer under license from Astellas as an anthelmintic veterinary drug for cats and dogs in combination with praziquantel (Profender®) and in combination with toltrazuril (Procox®).

78. The mechanism of action is dual: It acts at the neuromuscular junction and stimulates presynaptic receptors. The macrofilaricidal effect will be related to the paralysis of the worm.

79. The conclusion from in vivo studies is that Emodepside has a macrofilaricidal effect. Comparable efficacy was obtained in all tested doses in mice (25, 12.5 and 1 mg/kg) with a reduction of adult worms of about 80%. Exposure of Emodepside depends on the formulation. Pharmacokinetic parameters of efficacious doses in both mouse and jird models are within the same range:

   i) Mouse: 5x 1 mg/kg (capmul solution), Cmax = 84 ng/ml, AUC0-last = 1399 ng·h/ml;

   ii) Jird: 5 x 50 mg/kg (Cremophor suspension), Cmax = 145 ng/ml, AUC0-last = 2097 ng·h/ml Emodepside is currently in preclinical development. It is planned to enter clinical development in 2015.

80. The product development agreement signed between Bayer and DNDi is a landmark for both organizations with a comprehensive collaboration along all stages of product development, up to implementation. Bayer will be responsible for the pharmaceutical development, investigational medicinal product supply, and later the manufacture and distribution of the product. DNDi is in charge of preclinical and clinical development. DNDi would like to acknowledge the financial support from the Bill & Melinda Gates Foundation to carry out this research.
TCC Comments:

81. TCC thanked Dr Perdrique for the presentation and DNDi for the new idea in development of new drug that can be another value added for APOC. The committee however advised the study group to move to the ochengi model for cow which is closer to human model.

(vi) Multi-country Comparison of Diagnostic tools for detection of Oncho, LF and loasis

82. The NTD Support Center based at the Task Force for Global health is supported by the BMGF and the USAID to overcome NTD elimination challenges through Operational research.

83. Dr Maria Rebollo presented the MoU signed between the NTD SC and APOC to conduct a multicountry comparison of multiple diagnostic test for Oncho, LF and Loa loa. Studies will be conducted in at least 8 countries during delineation mapping and epidemiological assessment and they will involve the use of skin snip test, Ov16 RDT, OV16/Wb123 RDT, OV16 ELISA, Wb123 ELISA, Loa PCR, WB PCR, LF MF, Cellscope, LIPS Loa loa, DEC patch.

84. NTD SC in collaboration with APOC is supporting the work to address challenges related with Loa loa co-endemicity with Oncho and LF.

85. Projects include the development of a data base for all 10 countries endemic for Loa loa containing information of endemicity of LF, Oncho and Loa loa at district level and the required strategy to eliminate Oncho and LF on each scenario.

86. Sensitivity and specificity of the different LF, Oncho diagnostics tools in the presence of Loa loa are being explored in different regions in Cameroon in collaboration with partners.

87. NTD SC and AFRO with funding from the BMGF have committed to complete mapping of NTDs in Africa by 2015. A Road map has been developed including the support of delineation mapping for Onchocerciasis in Africa through APOC.

TCC comments:

88. TCC noted the development of this diagnostics and looked forward for the results of this important research.

(vii) Update on Protocol for Independent Monitoring of treatment coverage of CDTI Projects: Results of the pre-test to assess the feasibility of the proposed tools

Manual for the evaluation of therapeutic coverage

89. Prof Méda presented the results of the pre-test of the manual on independent evaluation of the therapeutic coverage. This presentation was made as part of updating TCC on the application of the recommendations formulated during the 2013 September session, following the 1st draft of the manual.

90. TCC was informed that this manual was reviewed taking into consideration all the comments made by the TCC. The main protocol is based on a survey 30X10X1. A selection of 30 villages per CDTI project, of 10 concessions per selected village and 1 household per concession drawn by lot. About twenty tools were developed for the application of the protocol.
Two pre-tests were then carried out in Burkina Faso and in Burundi to check how robust was the sampling plan, to calibrate the budget, the staff and time needed for the implementation of the protocol. The choice of these countries has been dictated by their availability, the fact of being an OCP or an APOC country, the authorization granted by the national authorities.

The pre-test in Burkina Faso was carried out in May 2014, six months after the ivermectin distribution campaign. The pre-test in Burundi was carried out in July 2014, five months after the end of the campaign.

It was noted from the presentation that there were some gaps between the rates of therapeutic coverage of community directed distributors and the independent survey in both countries; but these gaps are more noticeable in Burkina Faso compared to Burundi. The average cost of the independent survey in a country is about $20,000.

**TCC comments:**

The TCC members asked some questions mostly relating to: i) the unity of calibration of the manual implementation cost. The scale of Burundi seems to be the reference unit, ii) respondents, implications of weak results at the level of Burkina Faso, iii) The support of Sightsavers was requested by APOC in order to resume sensitization in the field, iv) the reasons for the gaps existing between community directed distributors and the independent survey and between Burkina Faso and Burundi, v) the realistic cost of the manual implementation depending on contexts, vi) the amplification of the application of the manual in the countries could help estimate the real average cost, vii) the denominator for the calculation of the therapeutic coverage.

The Committee thanked Prof Méda for the results of this pre-test. TCC further formed a sub-committee to make an in-depth-review of the manual for its validation prior to sharing it with the countries. The sub-committee is to produce the outcome of their in-depth review to the chair of TCC within a month.

**viii) Coordinated Mass Drug Administration (MDA) in DRC, Cote d’Ivoire and Nigeria: Results and lessons learnt**

Dr Sobela made a presentation on the results of Coordinated Mass Drug Administration (MDA) campaigns carried out in three countries: Côte d’Ivoire, DRC and Nigeria to scale up interventions and to achieve treatment targets in 2014. After a brief introduction on the justification, he described the process with different steps and key activities carried in each country targeted. He presented the main partial outcomes/results related to the number of communities and people reached, the number of CDDs and health workers trained, IEC materials produced and the number of people treated, the challenges encountered, lessons learnt and the way forward.

TCC was also informed about the total cost of the campaign, the distribution of persons trained by gender, the presentation of results against targets, training modules used, the organization of the campaign in urban areas, the involvement of small local players on the reporting process of the countries to APOC.
TCC comments and recommendations

98. TCC thanked Dr Sobela for the presentation and commended APOC Management, supporting partners (End Fund, Sightsavers, HKI, MDP, and SCI), the three countries and local actors for their efforts, good collaboration and very good achievement. The committee observed that scaling up is essential to achieve treatment targets by country and the global elimination of LF by 2020 and Oncho by 2025.

99. TCC recognized the importance of maintaining this momentum and achievements if resources are available, especially in those countries that have requested the extension by increasing their drug orders for 2015.

100. The committee also encouraged APOC to continue to work in collaboration with other partners and to increase advocacy support in direction of endemic countries to mobilize resources and supporting partners to honour their commitments and promises for the scale up of this coordinated distribution and implementation of these key recommendations. TCC also advised to complete these partial data, to submit the final report and an article for publication.

RESEARCH ON NEW CONTROL AND SURVEILLANCE TOOLS BY COLLABORATING INSTITUTIONS: Agenda item 9

(i) Update on Moxidectin development

101. Mark Sullivan, CEO of the Not-for-Profit Australian organization Medicines Development for Global Health (MDGH, www.medicinesdevelopment.com) to whom WHO licensed all data on moxidectin to pursue registration of moxidectin for onchocerciasis and other neglected diseases presented the update.

102. MDGH is a not-for-profit public company registered as a charity in Australia. According to its constitution all funds in excess of expenses need to be used to meet the charitable purpose of the organisation.

103. MDGH received a commitment of 10 Million USD from the Global Health Investment Fund (GHIF, www.ghif.com) to re-establish manufacturing of moxidectin for human use and prepare a dossier for registration of moxidectin for use in onchocerciasis (http://ghif.com/us10-million-investment-into-the-registration-of-moxidectin/).

104. Mark Sullivan presented the scientific rationale based on which MDGH agreed to take on moxidectin development and GHIF decided to finance these efforts, notably the comparative evaluation of ivermectin and moxidectin in terms of structure/activity relationship, pharmacokinetics, metabolism, toxicity in animals as well as PK, safety and efficacy data from Phase 1, 2 and 3 studies.

105. Prerequisite and time limiting step for submissions for registration of moxidectin is the re-establishment of manufacturing capacity since the capacity established by Wyeth is not available anymore following Pfizer’s acquisition of Wyeth. Furthermore, several product batches need to be manufactured and their stability established. Consequently, moxidectin cannot be available before 2018.
106. MDGH intends to repay GHIF and implement a moxidectin delivery plan with the proceeds from the sale of the Priority Voucher (PRV, http://www.priorityreviewvoucher.org/, http://www.raps.org/Regulatory-Focus/News/Priority-Review-Voucher/) the FDA will provide upon moxidectin registration (estimated value USD 30 - 70 Million based on the first and second PRV sold for USD 67.5 M and 125 M, respectively).

107. MDGH also intends to develop and, if warranted by the data, register moxidectin for other diseases in neglected populations, notably lymphatic filariasis, soil transmitted helminths and scabies. Scabies is caused by infestation with a mite and affects poor and vulnerable populations both in the developed and the developing world with prevalence rates varying from 2.71/1000 to 46%. The direct sequela include those of onchocerciasis (sleep loss, inattention due to itching, secondary infections and their complications, socio-economic impact on households). Scabies also causes significant costs due to its long term health sequela, including renal and heart disease (Fuller, 2013, Hay et al. 2013). Based on moxidectin's long half life (20-40 days), a single dose is expected to have activity throughout the life cycle of the mite eliminating the need for repeated treatments which face compliance problems.

108. MDGH plans to sell moxidectin for scabies in developed countries for a profit and to invest the profit into financing at or below cost provision of moxidectin for onchocerciasis and scabies in developing countries. MDGH has already committed to make moxidectin available for onchocerciasis at no more than cost of manufacture and support, but it acknowledges that moxidectin should be donated if this can be afforded. Therefore, if successful, the PRV and scabies returns may provide the foundation of a donation program and MDGH plans to work with other stakeholders with the goal of providing moxidectin free of charge for onchocerciasis elimination.

TCC comments:

109. TCC recalled the fact that TCC, as well as all other external advisory committees which reviewed the data emerging from the moxidectin studies, encouraged TDR and APOC to find a way to continue moxidectin development. TCC support for continuing moxidectin development is based on the fact that all data available to date indicate that moxidectin will be a valuable tool within the alternative treatment strategies for accelerating progress towards elimination of onchocerciasis. It noted the significant obstacles that moxidectin development has faced over the years and its continuous support for moxidectin development.

110. Therefore, TCC was very content to receive the news that moxidectin development can now continue, congratulated Mark Sullivan and wished MDGH the best for bringing moxidectin to registration for onchocerciasis, scabies and possibly other neglected tropical diseases and its plans for providing moxidectin to countries free of charge.

(ii) Research on the vulnerability of Onchocerciasis and LF control to emergence of resistance

111. Dr. Kuesel provided the update on research on the vulnerability of Onchocerciasis and LF control to emergence of resistance.

112. Two collaborative research groups (Cameroon/Canada, Ghana/APOC/Australia) are continuing the search for genetic markers of suboptimal response of *O. volvulus* to ivermectin and, if applicable, the development of a genetic marker-based tool for control programmes for surveillance of the frequency of such genotypes.
113. Two research groups (Netherlands, Australia) received funding for modelling the spread of parasites with low drug susceptibility within and between parasite and human populations. The two groups have complementary expertise and TDR facilitates their collaboration to ensure synergy.

114. One collaborative research group (Ghana/APOC/Australia) received funding for the search for population genetic markers that could facilitate definition of *O. volvulus* transmission zones.

115. TDR has issued a call for proposals to characterize the variability/distribution of response to the drugs early during mass drug administration (MDA) for parasites controlled by preventive chemotherapy and to obtain thus a basis for conclusions about the potential emergence of resistance from data obtained after long term MDA. The call will be open until mid-April and TDR hopes to receive a lot of proposals for the statistical analysis and/or from investigators willing to collaborate by providing their data.

**TCC comments:**

116. TCC welcomed the fact that TDR is continuing research in this area and encouraged researchers, NGOs and control programmes to contact TDR for collaboration.

(iii) Update on preparation for DEC patch availability

117. Dr. Kuesel provided the update on behalf of herself and Dr. Afework who is the APOC focal point for the DEC patch. As reported at the last TCC, Lohmann Therapie Systeme will manufacture transdermal delivery technology based DEC patches (LTS-2 DEC patch) and provide to WHO at a cost as per the WHO - company agreement. The cost/patch is 0.694 Euro for the first three batches (batch size 200 000) and 0.553 Euro for the following batches.

118. A video showing the application of the LTS-2 DEC patch is available. In the video the patch was placed at the posterior iliac crest where skin snips are taken at the Onchocerciasis Chemotherapy Research Center (OCRC, as well as by Dr. Boussinesq and Prof. Boakye). This is a position more posterior than used previously for the OCP DEC patch. There are no data to suggest that skin microfilariae levels and hence sensitivity differ between these locations.

119. APOC planned to buy the first batch for Phase 1a, Phase 1b epidemiological evaluations and delineation of treatment zones as well as the study planned to compare all currently available onchocerciasis diagnostics. To date, this plan could not be implemented due to lack of funds for activities.

**TCC comments and recommendations:**

120. TCC noted the need to include reading of the skin reaction in staff training on DEC patch use (as conducted for use of the LTS-2 DEC patch during the elimination studies in Mali / Senegal by OCRC staff) and to obtain clear pictures or videos showing the skin reactions.

121. TCC encouraged APOC to identify funds for the purchase of a batch so that the DEC patch can undergo the large scale evaluation of its sensitivity and specificity planned, including in people heavily infected with Loa loa.
REPORT ON THE LAST MECTIZAN EXPERT COMMITTEE MEETING: Agenda item 10

122. Dr Sodahlon reported on the 52nd MEC meeting which took place in New Orleans, USA on 29 October 2014. The meeting was attended by MEC members and liaison members. Following highlights were made on MEC decisions:

   i) **PENDA and plans for a new entity:** MEC reiterated the need to remain involved as an active partner in the development of strategies for the elimination of LF and onchocerciasis through the new PENDA structure.

   ii) **Ivermectin treatment in loa loa areas:** The MEC reiterated that onchocerciasis should not be treated with Mectizan in hypoendemic areas co-endemic with loiasis until the current research is completed to identify the safety threshold of loa loa prevalence.

   iii) **Review of drug applications:** MEC approved the Togo application for twice yearly treatment but required from Nigeria to submit for review a dossier that justifies the need for twice yearly treatment. Efforts to be made with WHO to resolve the application form issues.

   iv) **Supply chain issues - new importation tax in DRC:** MEC will continue collaborating with all stakeholders in order to find a permanent solution.

**TCC Comments:**

TCC thanked Dr Sodahlon for the presentation of highlights of the 52nd MEC meeting and expressed its appreciation for MEC supports.

**REMARK BY TECHNICAL ADVISORS TO APOC MANAGEMENT: Agenda item 10**

123. The two technical advisers to APOC Management (Prof Abiose and Dr Boussinesq) expressed their appreciation for the progress made despite the sad news on the closure of APOC. They commended APOC management for the work done. They also observed that a lot of good work was carried out at the countries’ levels and congratulated them for that. They advised APOC management to complete elimination activities in at least three countries to demonstrate that elimination is happening before closing as it will be a strong message to the partners. They appreciated the quality of the scientific works on going and observed that there is hope for success. They also expressed their appreciation for learning a lot of science during the various technical sessions and most importantly the friendship developed during these periods and hoped this will continue after APOC.

124. TCC endorsed the remarks and thanked the advisers for their inputs. The committee thanked Prof Abiose for her huge contribution to Onchocerciasis activities. The committee also thanked Dr Boussinesq for his scientific remarks and contributions in oncho research.

125. The committee seized the opportunity to encourage APOC Management to publish all that are going on, especially epidemiological evaluations, as it is very important to document on the success of APOC. Important achievements in ex-OCP countries should be published, highlighting some of the challenges. Evidence articles by TCC, including the nodules should be published as there are huge data on all these activities.
126. APOC Management also seized the opportunity to inform the TCC on the pressure being put on the management to provide data to partners, even those who are not contributing to APOC funding. The management explained that the data kept at the management level belong to countries and can not be given to any partner without prior authorization from countries. However, for data belonging solely to APOC, they can be given out if requested by contributing partners.

127. The Management also informed TCC that all ex-OCP data were converted into new data base and the Management is working to pull these data together with APOC ones and build a robust data base that will be left with WHO.

128. TCC took note that the data from OCP will be pulled together with APOC data and left at the custody of WHO. The committee encouraged APOC to put these data into public domain by publishing.

REVIEW OF OPERATIONAL RESEARCH PROPOSALS: Agenda item 12

129. Even though there was no operational research proposal, TCC felt that since it was the last session, a solution should be found for the outcome of operational researches being carried out in Cameroon and Nigeria. APOC Management should also update the list of operational researches funded by APOC and make the list available to TCC members within a month.

MANAGEMENT OF THE APOC TRUST FUND

REPORT ON THE FINANCIAL MANAGEMENT OF APOC FUNDED PROJECTS: Agenda Item 13

130. This presentation was outlined in four major points:

- Progress made in returns submission from January to December 2014,
- Status of Financial returns up to 2014,
- Ageing report for financial returns,
- Status of FACE returns from 2013-2014.

131. The APOC management indicated that following TCC recommendations, field missions have been conducted in 8 countries to provide training and certification of financial reports and written reminders sent to all the project co-ordinators. This resulted in substantial reductions in the number of outstanding reports for year 2013 to 4%.

132. The current status of financial returns shows that, out of the 2909 reports due as at December 2014, a total of 2242 reports have been received and 667 are still outstanding. This is reflected in a submission rate of 77%, increased from 66% submission rates in September 2014.

133. Out of the 667 outstanding reports, 124 are due for less than six months; 528 due for 6 to 12 months and 15 due for more than 12 months. The total of 543 outstanding reports for more than six months is owed by 56 projects located in 11 countries, with Nigeria and DRC having the maximum number of delays; 17 out of 28 projects and 8 out of 22 projects respectively.
134. In terms of FACE submission, the report showed that outstanding reports for 2013 and 2014 are 12 and 133 respectively. These reports have to be submitted latest by December 2015 and DFCs closed.

REPORT ON THE REVIEW BY APOC MANAGEMENT OF THE FINANCIAL CONTENT OF 1ST, 2ND, 3RD, 4TH, 5TH, 6TH, 7TH, 8TH, 9TH, 10TH, 11TH, 12TH, 13TH, 14TH and 15TH YEAR PROGRESS REPORTS AS AN INTRODUCTION TO THE REVIEW EXERCISE: Agenda Item 14

135. This presentation was outlined in three main chapters:

- The background that lead to the budget downscale,
- The high level budget overview,
- CDTI projects implementation in year 2014.

136. Following the discussions started during the 144th CSA session held in Geneva, a mid-term review was conducted during the 145th CSA session held in Ouagadougou, and it was decided that the budget approved for 2014 be scaled down from USD 25,014, to USD 19,000,000. This decision was reached after considering the inflow of funds and the projected resources flow for 2014-15.

137. The orientation from the CSA in revising the budget was to curtail the routine epidemiological and entomological activities to upscale treatment. The orientation was implemented by APOC management and the following budget appropriation lines have been revised downward:

- Evaluations activities within the EVE unit,
- Staff salaries,
- Administration and management costs.

138. After the budget review, the allocation per major area of work is as follow:

<table>
<thead>
<tr>
<th>Result Area</th>
<th>Allocation</th>
<th>% age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration, Management, leadership and</td>
<td>13,261,129</td>
<td>47%</td>
</tr>
<tr>
<td>Partnership</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advocacy and transition to the new entity</td>
<td>1,768,467</td>
<td>6%</td>
</tr>
<tr>
<td>Co-implementation</td>
<td>1,799,549</td>
<td>7%</td>
</tr>
<tr>
<td>Implementation of CDTI</td>
<td>8,486,606</td>
<td>30%</td>
</tr>
<tr>
<td>Monitoring/Evaluation/Surveillance</td>
<td>2,774,249</td>
<td>10%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>28,090,000</td>
<td>100%</td>
</tr>
</tbody>
</table>

139. As at February 28, 2015 the overall budget implementation rate is 69% and all results areas have an implementation rate ranging between 61% and 78%. The lowest implementation rates 69% for co-implementation and the highest rate for advocacy and transition to the new entity 78% and CDTI implementation 76% respectively.
140. During the 2014 year, APOC has implemented a total of 127 projects and supported 4 country programmes for regular activities and 7 country programmes for post surveillance. The total amount planned for field activities was USD 7,144,161 and as at December 2014 this amount was committed at 99%.

**TCC Comments and recommendations:**

141. TCC thanked Mr Jain Amit Kumar for the two presentations and APOC management for ensuring that accountability of funds made available to projects is well done.

142. Regarding the separate financial reports some partners are requesting for their contributions, the committee recognised that producing such reports will be difficult for APOC Management since all contributions go to the Trust Fund which is a basket fund, before they are disbursed to WHO for APOC activities. Moreover, there are audited financial reports produced every year on funds disbursed to WHO and which are shared with all partners.

REVIEW OF 1ST, 2ND, 3RD, 4TH, 5TH, 6TH, 7TH, 8TH, 9TH, 10TH, 11TH, 12TH, 13TH, 14TH AND 15TH YEAR ANNUAL TECHNICAL REPORTS: Agenda Item 15

**REVIEWS OF ANNUAL TECHNICAL REPORTS**

**CAMEROON**

*NOTF/HQ 16th year annual technical report*

143. The report is fairly well written and presented with key information that allows to appreciate the NOTF’s effort. The executive summary contains results that help appreciate the overall performance of the projects and also the key challenges to be taken up. The report also provides details on the development of therapeutic coverages for each project during the time bracket going from the last 7th to the 16th years.

144. TCC encourages sensitization and mobilization efforts towards the other ministerial departments and also the existence of a detailed plan of action for 2015 and a standard supervision form. However, the NOTF should continue specific analyses by project to check the hypotheses formulated as being the probable causes of the low performance of some projects, the high rates of absenteeism and refusals. The ratio of CDD/population to be treated of 1/200 should be improved. Female CDDs rate has not increased significantly.

**TCC Recommendations:**

To the **NOTF:**

i) Continue the efforts undertaken to the setting up of CSM at the level of all the projects;

ii) Continue the efforts for the setting up of mechanisms of reinforcing weak projects, particularly for the management of SAE cases, where they have been usually observed;

iii) Make efforts to improve the CCD/population ratio and women involvement.

To the **Management of APOC:**

i) Continue to help the NOTF to implement the planned activities in its 2015 plan of action.

145. **TCC accepted the report.**
DRC

*NOTF/HQ 14th year annual technical report*

146. The report is well written and presented with the key information that allows to evaluate the global status of onchocerciasis control in DRC. The executive summary contains results that help appreciate the overall performance of all the projects and the key challenges to be taken up. Among these challenges the problem of funding by the central government and the effective mobilization of funds are very important for the sustainability of the projects. The report describes the progress of the therapeutic and geographic coverages for all the projects for the past 14 years, including the Ituri Sud project that is only in its 2nd year of implementation. But the report does not do the analysis of the situation of each project in order to identify projects that are weak and that need more support. The CDD/population ratios of 1/279 and 3 male CDDs/ 1 female CDD are extremely weak. Community involvement is globally unsatisfactory.

**TCC recommendations:**

To the NOTF:

i) Make some efforts in analyzing the performance of each project for the last 14 years, in terms of therapeutic and geographic coverages, Mectizan management, community involvement, women involvement, absenteeism and refusals of treatment, and finally funds mobilization capacity;

ii) Continue the efforts for setting up the CSM at the level of all the projects;

iii) Make efforts to improve the ratios of CDD/population and women involvement.

To the Management of APOC:

i) Provide support to the NOTF for the development of their communication plan.

147. **TCC accepted the report.**

GHANA

*Ghana CDTI Project 4th year annual technical report*

148. Ghana’s CDTI project now covers 90 districts. The increase from 73 to 90 districts was a result of a recent political re-demarcation of districts. Forty four (44) of the 90 districts receive annual treatment, while the remaining 46 districts receive biannual treatment. The programme is in the process of undertaking delineation of its hypo-endemic areas for further treatment as well.

**B. Achievements**

149. Two round of treatment were achieved in 2014. However, the results shared in the 2014 report are for treatment round one covering 85 districts. Performance has been steadily increasing as evidenced by coverage rates. The rates for 2014 were 91.8 and 81.7 for geographic and therapeutic coverages respectively.

**TCC Recommendations:**

i) Scale up geographic coverage rates to 100% - The data in the 2014 report suggest that only 85 of the 90 districts were reached during the first round. The project should look for innovative ways to make sure all target communities receive treatment annually.
ii) Improve therapeutic coverage for districts showing coverage rates below 80% - The project achieved good coverage rates for most districts. Effort should be made to consolidate gains by ensuring that the few districts lagging behind - for example Assin South (68.9%), YiliKrobo (66.5%), achieve the desired coverage rate.

iii) Justify the rationale for the plan to initiate treatment in hypo endemic areas- The most available and updated REMO data suggest that current geographic catchment area of 90 districts already includes all hypo endemic areas.

iv) Account for large amount of mectizan tablets remaining in excess of 8 million tablets.

v) Recruit more CDDs. The work burden for CDDs is quite heavy, more so during 2014. The ratio for 2014 was 1 CDD to about 600 persons. Corresponding ratios for previous years were 1:398 persons in 2013 and 1 to 409 persons in 2012.

vi) Take steps to address challenges uncovered during supervision – More especially poor practices demonstrated by some CDDs that will likely have implications on coverage rates. For instance, the tendency of some CDDs to hand over tablets without waiting to observe administration, will influence the inference on therapeutic coverage rates.

150. **TCC accepted the report.**

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**NIGERIA**

**NOTF/HQ 16th year annual technical report**

**Overall Comments:**

151. This is a well written report although there is a need to:
   i) Ensure consistence in the year of activities being reported and period for planned activities – there are references to 2013 activities and planned activities for 2014 instead of 2015;
   ii) Ensure completeness of the Table on finance, e.g. there are no data for Nasarawa;
   iii) Focus on poor performing States/LGAs/Communities to ensure progress towards elimination;
   iv) Increase advocacy campaigns with the Federal and State governments to generate domestic funds for oncho activities.

152. The Programme is encouraged to share:
   i) The Quarterly Newsletter with other countries for lesson learning,
   ii) The Integrated NTD tools with other countries,
   iii) Draft integrated monitoring tools.

153. The Programme is also encouraged to share the results of the various ORs:
   i) Factors relating to CDD attrition in Gombe State has been approved by APOC/TCC and implementation is expected to take place in 2014;
   ii) Sustainable ways of CDD motivation to ensure retention in Imo State;
   iii) Increasing community participation in Community Directed Treatment with Ivermectin in Benue State;
   iv) Document the lessons learnt in the transition from disease specific technical groups to NTD.

154. **TCC accepted the report.**
SIERRA LEONE

*Sierra Leone CDTI Project 6th year annual technical report*

155. During the reporting period (2014) minimal activities took place due to the Ebola outbreak; the exception being advocacy and community sensitisation through radio programmes. We continue to note the following: low female/male CDD ratio; the need for capacity building of the M & E Officer and the need for a sustainability plan which is not yet in place in spite of 5th year sustainability evaluation having been carried out.

156. Opportunities: the project should build on strong integration in the PHC structures and a broader base of supportive NGDOs.

Recommendation to improve the Programme implementation:

i) Implement the 2013 TCC recommendations: (i) Target females in the selection of new CDDs; (ii) Report only SAE and not minor side effects in Table 7; (iii) Discuss with APOC management the decision to exclude urban populations from treatment.

ii) Develop and implement a sustainability plan in line with the findings and recommendations of the 5th year sustainability evaluation.

iii) Request for support from NGDO partners to strengthen HR capacity for M & E.

Recommendations for APOC Management:

iv) Review the impact of the Ebola outbreak on the oncho programme and where necessary take appropriate remedial action.

v) Consider moving the programme to semi-annual treatment cycles to speed up progress towards elimination.

157. *TCC accepted the report.*

SOUTH SUDAN

*SSOTF/HQ Project 9th year annual technical report*

158. The SSOTF oversees the implementation of oncho control activities of 10 projects in South Sudan. Representatives are drawn from – MOH, NGDOs and WHO/ APOC. TCC 38 raised concern about the quality of implementation of CDTI activities, due to the political crises. TCC recommended suspension of activities until after re-launch of activities. Five states had re-launched CDTI by March 2015.

159. Challenges – In 2014, CDTI implementation continued to be compromised. The unstable political situation as well as longstanding challenges made it difficult for projects to make any meaningful achievements.

i) Funding constraints coupled with the late release of funds;

ii) Inadequate HR for programme implementation, more especially frontline health workers and CDDs;

iii) Poor access to communities especially during the rainy season.

160. The average therapeutic coverage for 2014 was only 19%.
TCC Recommendations:

i) Revisit the decision for the use of the Boma as the unit for computing geographic coverage - The use of the Boma instead of a village/community might lead to over estimation of the geographic coverage. It was not clear from the reports whether a Boma is counted as treated even if several villages within the Boma are missed during treatment.

ii) Intensify resource mobilization efforts to increase funding level for CDTI activities – The funds available for CDTI are insufficient and should increase. Funding responsibility must be shared between Government and NGDOs resources.

iii) Priority setting - Each project should set priorities to ensure that available resources are invested appropriately.

iv) Improve on the level of skilled manpower at national and project level especially with the training of CDDs. Only 35.5% of CDDs earmarked for training across projects received training.

161. **TCC accepted the report.**

UGANDA

Phase 5 (Kitgum, Lamwo & Pader) CDTI Project 4th year annual technical report

162. Phase V project, in its 4th year, covers 3 districts - Kitgum, Lamwo and Pader. Some unique characteristics of the project include:

i) High endemcity of onchocerciasis alongside nodding disease.

ii) MDA started in 2011 with support from APOC in addition to vector elimination.


iv) Population movement occurs especially in Lamwo which borders South Sudan.

163. This is a well-written report of a semi-annual programme in a post-conflict area. Innovative ideas have been applied in addressing community sensitization. There is need however for the programme to continue intensifying its efforts in improving treatment coverage which is yet to reach 80% on the average despite semi-annual treatment.

Recommendations on the report:

i) Clarify if this report is year 4 or year 5.

ii) Provide the title of the operational research that was carried out.

iii) Explain why more drugs were issued than requested by the project: requested 1,696,000 received 2,179,655 (483,655 tablets of Mectizan in excess of its request).

Recommendations for the project:

i) Strive to achieve and sustain 80% and above therapeutic coverage: 53% in round one and 67% in round 2.

ii) Ensure that treatment gap between the two rounds is agreed and standardized: There was a 4-month gap in between the 2 treatments. Semi-annual treatment started in 2012.

iii) Carry out operational research on the reasons for low treatment coverage.

iv) Intensify efforts at establishing CDTI structure in relation to communities’ obligation to the provision of CDD incentives.

164. **TCC accepted the report.**
ONLINE REVIEWS

BURUNDI

Bururi CDTI Project 8th year annual technical report

TCC comments:

165. This is a ninth-year project. Responses were provided to the recommendations of TCC38. The report is well structured and well written. The project covers 6 administrative communes, 3 health districts and 76 collines. The total population is 392,358 people (versus 380,780 in 2013). 60% of the health staff is mobilized in the CDTI. The partnership mechanisms are well described:

   i) The provincial task force for onchocerciasis and other NTDs control.
   ii) Population (that takes part in identifying CDDs).
   iii) Communal task force for onchocerciasis control.
   iv) Provincial, communal, zone and ‘colline’ administrations.
   v) Health committee and the Elected from the ‘collines’.
   vi) Religious denominations.
   vii) Medias.

166. The main partners are WHO/APOC, MDP, CBM and GG (Geneva Global). The number of CDDs is 811 (the 2013 report referred to 2,282 CDDs; their number was 2,714 in 2006) out of which 22% female. 316,867 people were treated in 2014, i.e., 1CD for 390 people (this figure is still too high). Co-implementation is effective with the distribution of Albendazole. The geographic coverage is 100% and the therapeutic coverage is 80%. Financial contributions were from APOC (49.5%), CBM (32%) and MSP (18.5%). A detailed review of the implementation of the recommendations from sustainability evaluation was presented. The weaknesses of the project are:

   i) CDDs attrition and workload on remaining CDDs.
   ii) Lack of local NGDO.
   iii) Defective material.
   iv) Financial constraints (that will be more marked with the closure of APOC).

Recommendations to the team:

   i) Continue efforts to recruit a greater number of CDDs.
   ii) Continue advocacy efforts to mobilize other financial resources.

167. TCC accepted the report.

Cibitoke-Bubanza CDTI Project 11th year annual technical report

TCC Comments:

168. This project is in an advanced position towards elimination of onchocerciasis and is still making progress. It is well integrated in the health system and within communities, although this position is to be maintained and improved. The management actually handle their work pretty well; the effectiveness of the control is probably facilitated by the weak endemicity but the quality of the results is unquestionable and deserves compliments.

169. The report is of excellent quality, well informed (still long despite the promise of the coordinator) but very informative and explanatory. Information goes quite beyond the requests,
sometimes obsolete contained in the TCC evaluation form. The report is very well documented with several tables and is illustrated with good maps.

170. Information on treatments of soil transmitted helminths and schistosomiasis are as well documented as that on CDTI which is the indicator of an effective operational integration.

**Some gaps to be filled:**

i) Lack of a map on the status of the endemic disease and mostly the results of the epidemiological evaluations that APOC has conducted in the focus whose absence is harmful to valuing this excellent project.

ii) It is necessary to resume the training of the peripheral health staff this year.

iii) The commitment to resume a distribution timeline aligned with periods in which less agricultural activities are going on should be rigorously applied.

iv) Efforts on advocacy with the MoH should be emphasized so that funding should be at the level of the commitments and at the level of foreign donors, mostly those donating for NTD projects.

v) It is necessary to review the table of treated population figures, even though they may not affect the global results.

171. **TCC accepted the report and commended the national and local coordinators for a good job.**

**Rutana CDTI Project 8th year annual technical report**

**TCC comments:**

172. The Rutana project is obviously a well-managed project that is very advanced in pursuing the current objectives of APOC. The weak population concerned and relatively low endemicity rates do not change anything regarding its quality. Well integrated in the health system despite the gaps, adopted by the populations, presenting adequate sustainability perspectives, the project showed constant progress and is close to Onchocerciasis elimination and transmission stage.

173. Its challenge is its capacity to fund itself and to raise non-governmental funds to maintain efficiency guaranties that consist in maintaining the health workers and CDDs and having national technical managers take care of further evaluation and surveillance phases. This will obviously go through a more efficient and open advocacy and external fund raising system.

174. The report is of good quality, exhaustive and has faithfully (excessively at times; which make it long) met TCC’s requests. But it is more updated than that regarding the treatment of the evaluation results and other NTDs control.

175. It will be good that the coordinator resume to respond to the questions of the previous TCC, mostly identifying the advantages and drawbacks of CDDs harmonization, a vital stake for the project. It will also be good to correct the seasons of distribution. It is necessary that the treatment of the other NTDs be more clearly documented. The coordinator should particularly document the use of praziquantel while clearing the confusion between mebendazole and albendazole that occurs in many sections and tables.

176. The committee wished that APOC could help the project reach its elimination objective that is now close.

177. **TCC accepted the report.**
CONGO

*Congo Extension Project 11th year annual technical report*

TCC Comments:

178. This project is in its 11th year implementation with excellent coverages for 9 years, thanks to the dynamism of the coordination. Congratulations to the programme for maintaining such a good performance. However, despite the sensitization of the authorities to purchase new motorcycles, not proceeding to the replacement of the obsolete material may compromise the future of this performance. This opens again the debate on the necessity to diversify the funding sources, namely that of the government.

Recommendation to APOC:

i) APOC should replace the obsolete material and also undertake advocacy for the diversification of funding sources.

Recommendation to improve the report:

i) Table 10: Integrate the remaining stock of Mectizan of the previous year.
ii) Add the table of expenses per section to estimate the cost per person treated.
iii) Reduce the descriptive part of the country in the report to key information linked to onchocerciasis control.

179. In 2012, the project performance seems to be improved, particularly with an increase of CDDs, 10 times more the number of CDDs in 2010; and the percentage of women shifted from 4% to 18% in two years.

180. Continue efforts in order to:

i) Improve therapeutic and geographic coverages.
ii) Improve the impact of women on CDTI.
iii) Improve CDD/population ratios.
iv) Maintain the gains of the advocacy mission carried out by APOC Director by reinforcing IEC, sensitization and mobilization.

181. **TCC accepted the report.**

*Congo CDTI Project 11th year annual technical report*

TCC Comments:

182. The report covers the period going from January to December 2014. This is a 14th year project that covered a population of 880,606 people in 2013, 748 communities (133 in hyperendemic area; 615 in mesoendemic area) and 5 departments all located in the southern part of the country. In 2013, the geographic coverage was 100%. The UTG was to treat 739,728 people. 705,479 people were treated, for a rate of therapeutic coverage of 80.1%.
183. In 2014, the number of endemic communities went up to 842 out of which the data of 339 communities were not available at the time the report was finalized for submission to TCC40 including the four districts of Brazzaville; which is paradoxical, in addition to the communities of the Kinkala district in the department of Pool.

184. The coordination reported the results from the 503 remaining communities, a total population of 279,833 people, or 31% of the population covered by the project. The last report submitted to TCC was accepted, with recommendations and suggestions by the TCC to be taken into account by the team. It mainly consisted in continuing the efforts to reduce the CDDs attrition rate, conduct CSM and SHM in order to solve concrete problems, analyze the reason for the weak therapeutic coverages in the seven districts with coverages between 66% and 79%, improve women involvement in CDTI, and finalize operational research studies in order to use their results. TCC considers the incompleteness of the results presented as a constraint for the analysis of the report.

185. TCC expresses its concern about the sustainability of the project, taking into account the weak level of disbursement of the budget allocated by the government (less than 75%) and the fact that activities continue to receive essentially the financial support from APOC and OPC.

186. Consequently, TCC requested the coordination to submit a full report and provide satisfactory responses to TCC39 recommendations.

187. **TCC rejected the report.**

**CHAD**

*Chad CDTI Project 17th year annual technical report*

**TCC Comments:**

188. This is a project in its 17th year of implementation with acceptable coverages for about 10 years, benefiting from a strong involvement of the government. It was difficult to provide judgment on the 2014 report because it is incomplete (report from 5 health districts). While a final report is to be completed, the programme should work to improve the completeness and the promptitude of the treatment reports. It should also integrate in the CDTI platform, the control activities against the other NTDs. It is also important to reconsider the calendar of the activities such as social mobilization and supervision that should also cover the medicine distribution periods to get more impact.

189. **TCC rejected the report.**

**DEMOCRATIC REPUBLIC OF CONGO**

*Kasongo CDTI Project 8th year annual technical report.*

190. It is a 9th year project with a well written report. Responses have been provided to TCC38 recommendations. The project is located in the Maniema Province and covers 10 health zones with a population of 1 423 553 people (2014 census) living in 2 104 communities in an area of 80 000 km2. It is an oncho/loiasis coendemicity area, namely in the the Kibombo and Tunda health zones. Another health zone, that of Kalima (coendemicity of Oncho/loiasis/FL) is tied to the Kasongo project from now on and will begin the treatment in 2015. In 2014, the geographic coverage was 100% while the
therapeutic coverage was 80%. The project mobilized 7,688 CDDs who treated 1,143,426 people (i.e., 1 CDD for 148 people). No SAEs were noted during the treatments. The three key partners are APOC, MDP, and UFAR. The government financial contribution is too weak. CDTI is integrated in the minimum activity package. In 2015, the project will integrate the other NTDs (LF, Schisto, and STH).

191. The key weak points are the following:

   i) Government weak financial contribution.
   ii) CDD attrition (due to lack of incentives).
   iii) Data analysis capacity at the level of health zones.
   iv) Community supervision.

**Recommendations to the national team:**
   i) Continue efforts to maintain the therapeutic and geographic coverages.
   ii) Continue advocacy efforts for the mobilization of financial partners.
   iii) Pay a particular attention to the new health zone of Kalima due to coendemicity with loiasis.

192. **TCC accepted the report.**

**Lubutu CDTI Project 7th year annual technical report.**

193. This an eighth year project that covers four health zones, 54 health areas and 75 health facilities in the medical district of North Maniéma (Maniéma Province). In 2014, the total population was 391,505 (or 383,828 on page 12 of the report) people distributed in 671 communities. Key partners are APOC, MDP, and UFAR/Sightsavers. In 2014 the CARITAS NGDO ended its financial contribution (incentives allocated to the staff). The geographic coverage was 100%; while the average therapeutic coverage was 80% (3% of the communities only have a therapeutic coverage above 80%). 2,717 CDDs, (out of which 27% female), treated 313,730 people; i.e., a ratio of 1 CDD for 115 people. Sensitization activities were conducted for the mobilization of the political authorities at different levels. CDTI is used by other programmes: Nutrition, Malaria.

194. The main weaknesses are:

   i) Inadequate keeping of register.
   iii) Abiding by activity calendar.

195. Main threat: at the closure of APOC, if other sources for the funding of the activities are not found, the gains made by this project will undoubtedly be considerably affected.

**Recommendation to the project team:**
   i) TCC encourages the team and recommends that advocacy efforts be continued to mobilize other financial sources and consolidate the achievements.

196. **TCC accepted the report.**
EQUATORIAL GUINEA

Bioko CDTI Project 13th year Technical Report

197. This is in fact a 14th year project, since TCC38 had already reviewed the 13th year-report. Observations made in the 12th and 13th years reports are generally the same regarding this report, i.e.: an executive summary that is too long; a lot of inaccuracies and inconsistencies in the report. This project covers the Bioko Island and includes 4 districts. The estimated population is 81,318 people (2010 data) or 75,363 people (table 7), distributed in 129 communities.

198. The geographic coverage rates vary from 9% (Malabo) to 94% (Riaba), this corresponds to an average of 47%; the therapeutic coverage rates vary from 70% (Malabo) to 81% (baney and Luba); which corresponds to an average of 79%. The project does not have sufficient funds to implement its activities in an effective way: «One of the major issues that the project faces is the financial support of the government to help the Programmes get necessary funds to implement CDTI in a country like Equatorial Guinea ».

199. As indicated in the previous reports, it is necessary to refer to the general context of onchocerciasis in Bioko, namely the good results achieved in the process of eliminating the unique vector, Simulium damnosum. These results were achieved thanks to a strong technical and financial support from WHO/APOC (aerial spraying). There has not been any transmission for 10 years or any serious epidemiological situation anywhere including Malabo City. In addition, the establishment of NTDs general policy in the country is a great opportunity.

Recommendation to the national team:

200. In the framework of the forthcoming closure of APOC that used to be the main financial source for this project and taking into consideration the fact that transmission has been interrupted as mentioned earlier, TCC recommends that the national team continue the advocacy at the level of local authorities in order to mobilize necessary resources for NTD control.

201. TCC accepted the report.

SOUTH SUDAN

Central Equatoria CDTI Project 9th year annual technical report.

202. The project is in its 9th year of implementation. A relatively better security situation, as compared to the States in the northern part of the country, allowed implementation of programme activities to take place. However, inadequate funding seriously constrained implementation of planned activities. For example, no training of health and county staff took place; mobilization and advocacy activities were limited to the national and county levels and the need for more community registers to cover the target communities could not be addressed. Although many parts of Central Equatoria State are fairly accessible, the lack of a project vehicle and motorcycles for project activities compromises their effectiveness. This is further compounded by inadequate human resource capacity to implement the programme. Although the geographic coverage of 86% is high the therapeutic coverage of 28.7% attained is too low and not commensurate to the geographic coverage.

203. It is also notable that the NGDO partner, CBM, has not disbursed funding to the project for the past three years.
Recommendations to improve programme implementation:

i) Increase effort towards scaling up the GCR and TCR.
ii) Train and involve all health staff in the project area in CDTI activities (the current involved of 7.8% is inadequate for sustained programming).
iii) Ensure that the tables provide complete information. For instance, Tables 4 and 5 are incomplete.
iv) Calculate UTG at 84% rather than 80% of the target population.
v) Aim to carry out census and update community registers annually before each treatment cycle.
vi) Preferably store drug balances at county rather than at health centre level.
vii) Ensure that the drug orders are realistic. The remaining number of drugs in stock is too high - 1.8 million.
viii) Reduce drug wastage.

204. **TCC accepted the report.**

Western Equatoria CDTI Project 10th year annual technical report.

205. Western Equatoria CDTI project is in its 10th year of implementation. The project’s performance has been fairly stable over the last five years. Reported coverage rates even though sub optimal, were relatively higher than other projects in South Sudan. Long distances between communities have been a major obstacle for project implementation even during stable circumstances. In 2014 the geographic and therapeutic coverages were 90.3 and 67.3% respectively.

206. The use of the Boma instead of a village/community might lead to over estimation of the geographic coverage. It was not clear from the report whether a Boma is counted as treated even if several villages within the Boma are missed during treatment.

Recommendations:

i) Resources for CDTI activities must be predictable - Develop realistic plans and set realistic targets taking into account prevailing circumstances.
ii) Step up advocacy at state levels – to attract funding from the state government and NGDOs at that level.
iii) Explore practical ways to scale up coverage rates gradually - Given access issues, the project should plan towards implementing mass drug distribution during the dry season.
iv) Invest in supervision and in taking remedial actions to correct issues found during supervision.
v) The project needs to take the necessary actions to address the record keeping issues, which have implications for accuracy in coverage rates.

207. **TCC accepted the report.**

Western Bahr El Ghazal CDTI Project 9th year annual technical report

208. This report provides an update on ongoing activity in year 2014. A re-launch of this project was proposed by TCC39 but this only happened in March 2015. Therefore in reviewing this report some of the challenges experienced earlier by the project is yet to be addressed, especially as it regards low treatment coverage. Geographic coverage in 2014 was 57% while therapeutic was 13%. This outcome does not seem to justify $36,000 investment by APOC in 2014. Also only CDD training was conducted as project received funding late.
Recommendation for improvement of the project:

209. TCC 39 observed that CDTI activities are not effectively implemented in South Sudan because of the current crisis in the area. Communities have been restructured and prerequisite management structure and logistics for successful CDTI implementation do not exist. TCC therefore recommends suspension of review of South Sudan projects until full re-launch of the projects is concluded.

210. In line with the recommendation of TCC 39 effort need to be put in place to ensure there is effective programme implementation plan before funding is released.

211. **TCC accepted the report.**

**Northern Bahr El Gahzel CDTI Project 9th year annual technical report**

212. This report is well written although both the geographic and therapeutic coverage are very low (23.8% and 20.3%, respectively). The conflict situation in South Sudan interfered with CDTI activities that necessitated the re-launch of the project activities. In addition, the funding for CDTI was received late and all the activities (mobilization, treatment and supervision) had to be conducted within a short period of time - four months. The project lacks basic equipment and this has constrained its operations. It is however critical that South Sudan urgently reviews the implementation of onchocerciasis control as a country and put measures in place to ensure an expanded scope of the programme and efficient use of resources.

**Recommendations to the project team:**

213. The team needs to pay attention to the following key issues:
   i) Focus on increasing geographic and therapeutic coverage in all the Counties and communities.
   ii) Mobilize State and partner resources to strengthen the CDTI structures.
   iii) Increase the number of health staff involved in CDTI activities.
   iv) Pay attention to drug requisition so as not to have large stocks after treatment (currently reported at 1,387,873).

214. **TCC accepted the report.**

**Lakes CDTI Project CDTI Project 10th year annual technical report**

215. This project, like the others in South Sudan, was re-launched in 2014 following the interruption in CDTI activities as a result of conflict. It is notable that the WHO Representative attended the re-launch and reiterated commitment to the control of onchocerciasis. The funding for the project activities was received in August and the project team was forced to implement all the activities between September and December 2014. Activities were not implemented in Awerial and Yirol East due to flooding during the September – December period. Although the report is well written, there are major concerns with the project implementation that need to be addressed to ensure that the project increases both the geographic and therapeutic coverage.

**Recommendations to the project team:**

i) Build on the goodwill from the re-launch to increase geographic and therapeutic coverage.
ii) Mobilize State and partner resources to strengthen the CDTI structures.
iii) Increase the proportion of health staff involved in CDTI activities.
iv) Pay attention to drug requisition so as not to have large stocks after treatment (currently reported at 1,439,121).

216. **TCC accepted the report.**

**TECHNICAL REVIEW COMMITTEES REPORTS: Agenda item 16**

**CAMEROON**

**Cameroon Technical Review Committee: Report of the 12th meeting (TRC12)**

217. Dr EBENE Blandine Clarisse, Permanent Deputy-Secretary of the National Onchocerciasis Control Programme (NOCP) of Cameroon presented the report of the 12th Technical Review Committee (TRC) of Cameroon that was held in Yaoundé on 17 and 18 February 2015. A total of 15 reports from the CDTI projects was reviewed and accepted by the TRC.

218. The TRC noted a decrease in performance: the therapeutic coverage decreased in 11 projects, CSM was poorly implemented by most projects.

219. The following recommendations were made to the CDTI projects:

**Far North CDTI Project:**

i) Strengthen community involvement.
ii) Develop and implement a genuine supervision plan.

**Adamaoua 1 CDTI Project:**

i) Make efforts in sensitization of particular populations « the refugees » in order to reduce the number of refusals that are fairly high.

**Centre1 and Centre2 CDTI Projects:**

i) Improve the therapeutic coverage rate.

**Littoral 2 CDTI Project:**

i) Find out the actual causes of the decrease in the population figure and plan enhancing activities.
ii) Identify the reasons and plan efficient actions to solve census and therapeutic coverage related-issues.
iii) Clearly define the objectives of the advocacy and sensitization in order to improve community compliance with mass treatment.

**Centre 3 CDTI Project:**

i) Implement CSM.
ii) Find mechanisms to reduce the number of refusals and absentees.
iii) Reduce the number of CDD attrition.
iv) Finalize the number of communities.
Northern CDTI Project:
   i) Indicate and re-state the results of the project recent evaluations.
   ii) Explain why CSM was not conducted.

Littoral1 CDTI Project:
   i) Reinforce the education and sensitization of the populations and the opinion leaders to reduce the number of absentees and refusals.
   ii) Pay another visit to families whose members were absent during the first round.

Southern CDTI Project:
   i) Improve drug management.
   ii) Identify enhancing activities to reduce the number of villages with less than 80% TC rate.
   iii) Initiate practical training for CDDs to improve the management of the registers.

Adamaoua 2 CDTI Project:
   i) Community sensitization to increase the number of female CDDs.
   ii) Reduce the number of absentees.
   iii) Justify the increase of the number of communities.

Western CTDI Project:
   i) Reinforce community sensitization (to reach the absentees and refusals).
   ii) Include all the CSM modules in all training sessions.
   iii) Implement CSM in all the communities.

South-West 1 CDTI Project:
   i) Provide additional efforts to reduce the number of cases of refusals and absentees.
   ii) Make additional efforts to reduce the number of wasted or damaged tablets.
   iii) Make additional efforts to reduce CDD attrition.

South-West 2 CDTI project:
   i) Implement CDTI in the Ogurang health area.
   ii) Train CDDs efficiently.
   iii) Provide data on passive treatment in the Ogurang health area if possible.
   iv) Lay emphasis on community funds mobilization to motivate the CDDs.
   v) Use the USAID funds to implement CSM.
   vi) Implement treatment during the dry season.

Global discussions:

To the NOTF of Cameroon:
   i) Include a chapter to highlight community funds mobilization for CDDs incentives in the review grid.
   ii) Taking into account that some TRC members had doubts regarding the figures reported by the health districts, supervision was recommended particularly in the health district of Yoko.
iii) Make sure that NTD control indicators are taken into account by PBF (Performance-Based Fundings) particularly the Eastern region.

iv) Conduct further evaluation of the running of the Northern CDTI project and other projects with low performance in order to identify the reasons for their performance decrease and quickly correct the problems identified.

v) The TRC requested the reviewers to insist on data comparative analysis.

vi) Provide the reviewers with project sustainability plans for a better appreciation of the implementation of these plans.

vii) Include a section called « Perspectives » in the annual technical reports.

To the Management of APOC:

i) Provide the NOCP with the final reports of the epidemiological surveys conducted.

ii) Provide the countries with a template for the Oncho/LF report to facilitate its drafting, taking into account that the 2 treatments are integrated.

TCC Comments:

220. TCC took note of the report and thanked Dr Ebene for the presentation. The committee was pleased to note that Technical Review Committees put in place in countries are functioning very well. The committee hoped that funding of the meetings of these committees would be taken over by the countries.

NIGERIA

Nigeria Technical Review Committee: Report of the 14th meeting (TRC14)

221. Prof Braide, Chair of TRC Nigeria informed TCC that as recommended by TCC, TRC Nigeria is now set to operate within the NTD Steering Committee as a Sub-Committee. The Sub-Committee will hold it’s next meeting one day before the next NTD Steering Committee meeting scheduled to hold in April 2015. She informed TCC that achievements of TRC Nigeria are being documented for publication as recommended by TCC.

222. Prof Braide further informed TCC that the situation analysis (in sites with poor epidemiological survey results), commissioned and funded by APOC, has been completed. The objective of the analysis was to identify, through desk reviews and site visits, reasons for persistent high *Onchocerca* microfilariae prevalence levels, and to organize appropriate intervention to address issues identified.

223. The desk review revealed that the projects were doing well in integration, Mectizan management, coverage and equipment management. Performance was fair in planning and funding (APOC and NGDO) but very poor in supervision, monitoring, evaluation, community mobilization/participation, adequacy of human resources and funding by government at all levels.

224. Site specific findings showed that stability of population and accessibility were not major problems. Community involvement, adequacy of human resources, record keeping, coverage, compliance were low/minimal/poor in all sites including accessible sites with stable population. The
most disturbing gaps identified were inaccurate records/absence of records and discrepancy between reported coverage and actual coverage upon verification.

225. Recommendations have been made in the final report for bringing, as quickly as possible, the prevalence of onchocerciasis and the microfilariae loads to elimination level.

226. It is recommended that the same external teams that conducted the situation analysis carry out overall supervision of the next cycle of CDTI activities to ensure that all recommendations made are implemented according to the plan in this report, not only in the sites but in the entire geographic scope of the projects. The main report will be discussed in TRSC and NTD Steering Committee. Thereafter, it will be submitted to APOC and shared among partners. A project specific report prepared by each team and containing details of findings and recommendations, will also be made available to each project for use as in-depth guide.

TCC Comments:

227. TCC noted the report, thanked Prof Braide for her outstanding role in coaching Technical Review Committee members in various countries. The committee also commended the Nigeria TRC for detail report, full of thoughts.

CLOSURE OF THE SESSION: Agenda item 20

228. The closing session of the 40th session of the TCC which is supposed to be the last session of the independent scientific body of APOC was very touching. In his closing remarks, the Chair recalled the work of the TCC right from the first TCC in May 1996 and the achievements of the Programme over the years through their scientific advices. He thanked APOC Management who has worked relentlessly over these years leading to the success of the Programme. He indicated that, coming from a university background as a Chancellor of university, he learned more than he gave during his participation in TCC sessions and that APOC Programme is more than a university where scientists come and learn. He acknowledged the hard work carried out by APOC staff as well as their availability and enthusiasm, always working long hours after office closing hours.

229. The Chair then gave the chance to each TCC member to express his/her feeling at the closing period of APOC and the last session of the TCC. All TCC members concurred with the remarks of the Chair, some of them being in contact with onchocerciasis for more than 50 years. They all recognized that APOC TCC sessions are like a rendez-vous of receiving than giving, a rendez-vous which they never felt to attend, even some of them were forced to ask for casual leaves from their employers to attend, a real university where they come to learn more than they give. They all thanked APOC Management and staff for their availability, assiduity and hospitality, calm wisdom, industrious, friendly, in doing things in familiar way throughout these years. They asked APOC staff to be proud of the tremendous achievements they have made.

230. In his speech, the Director of APOC, Dr Jean Baptiste Roungou, expressed his gratitude and appreciation for all remarks made by the TCC members. He expressed his sadness to see disappear all achievements and expertise produced by “the uniservity of Oncho”. He however expressed his hope to see a new university coming out of that of Oncho, the university of NTDs. Dr Roungou recalled what happened at the beginning of the setting up of the LF elimination Programme and feared the same is happening for the elimination of oncho, forgetting unfortunately our poor populations at the
end of the road suffering from that scourge of river blindness and our duty to relieve them. He indicated that wherever he will be, his fight will remain the same, that of the well being of our populations and that good results can be obtained in Africa by Africans.

231. To end his message, Dr Rougou thanked each one of the TCC members and scientists present, for their dedication to oncho activities based on scientific evidence and wished them courage, despite the difficult period the oncho family is going through. He also thanked everybody including the APOC staff for their dedication to work and hoped the world would hear their message.

232. It was on these touching notes full of wisdom, that the TCC members presented a congratulation card to APOC Management on which each one of them penned a word, followed by sharing the cake they offered to the Management.

233. On these ceremonial closing remarks, the Chair declared the 40th session of the Technical Consultative Committee of APOC closed, after expressing special thanks of the committee to the interpreters for their dedication and friendship.
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Annex 2: TCC40 Agenda

1. Opening
2. Adoption of the Agenda

Information

3. CSA: matters arising from the 148\textsuperscript{th} and 149\textsuperscript{th} sessions
4. JAF: matters arising from the 20\textsuperscript{th} session: decisions
5. APOC closure
6. TCC: Follow-up of the key recommendations of the thirty-ninth session

Strategic and technical issues

7. Elimination of Onchocerciasis infection and interruption of transmission:
   (i) Elimination of Onchocerciasis with ivermectin in Africa
       a) Update on Epidemiological evaluations
       b) Update on the potential of nodule palpation for epidemiological evaluation
       c) Delineation of treatment boundaries
       d) Update on Entomological activities:
          - Delineation of transmission zones
          - Black flies trapping and other studies related to Onchocerciasis transmission
   (ii) Elimination of \textit{O. volvulus} infection: New diagnostics of PATH
   (iii) LF and Oncho elimination Programmes collaboration
   (iv) Perspectives on Lymphatic Filariasis (LF) and Onchocerciasis elimination (DOLF)
   (v) Emodepside, a potential new treatment in development for onchocerciasis (DNDi)
   (vi) Multi-country Comparison of Diagnostic tools for detection of Oncho, LF and loasis
   (vii) Update on Protocol for Independent Monitoring of treatment coverage of CDTI Project:
        Results of the pre-test to assess the feasibility of the proposed tools
   (viii) Coordinated MDA in DRC, Cote d’Ivoire and Nigeria: results and lessons learnt

8. Research on new control and surveillance tools by collaborating institutions:
   (i) Update on moxidectin and TDR funded research in support of APOC objectives
   (ii) Update on the DEC patch test and Lohmann

9. Report on the last Mectizan Expert Committee Meeting
10. Remarks by Technical Advisors to APOC Management
11. Review of operational research

Management of APOC Trust Fund

12. Report on the financial management of APOC funded Projects

Reviews

13. Report on the review by the APOC Management of the financial content of 1\textsuperscript{st}, 2\textsuperscript{nd}, 3\textsuperscript{rd}, 4\textsuperscript{th}, 5\textsuperscript{th}, 6\textsuperscript{th} and 7\textsuperscript{th}, 8\textsuperscript{th}, 9\textsuperscript{th}, 10\textsuperscript{th}, 11\textsuperscript{th}, 12\textsuperscript{th}, 13\textsuperscript{th}, 14\textsuperscript{th}, 15\textsuperscript{th} and 16\textsuperscript{th} years projects progress reports as an introduction to their technical review
14. Review of New project proposals and 1\textsuperscript{st}, 2\textsuperscript{nd}, 3\textsuperscript{rd}, 4\textsuperscript{th}, 5\textsuperscript{th}, 6\textsuperscript{th} and 7\textsuperscript{th}, 8\textsuperscript{th}, 9\textsuperscript{th}, 10\textsuperscript{th}, 11\textsuperscript{th}, 12\textsuperscript{th}, 13\textsuperscript{th}, 14\textsuperscript{th}, 15\textsuperscript{th} and 16\textsuperscript{th} years annual technical reports of projects
15. Technical review Committee: Cameroon and Nigeria
16. Conclusions and recommendations of TCC40
17. Closure of the session
### Annex 3: Follow up of the key recommendations of the 39th Session of TCC

<table>
<thead>
<tr>
<th>Subject/Topic</th>
<th>Action to be taken</th>
<th>Status of implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Report of the Transition task Force: agenda item 5</strong></td>
<td>i) Review the membership of the TTF and consider including the members in consideration of the gaps highlighted.</td>
<td>Implemented</td>
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<td></td>
<td>ii) The TTF should revise the report and ensure that it is reflective and appreciative of the achievements of APOC, which remains the basis upon which PENDA is being developed.</td>
<td>Implemented</td>
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<td></td>
<td>iii) The TCC recommends that the Director of APOC presents these observations and recommendations to the next CSA.</td>
<td>Implemented</td>
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<td><strong>APOC activities Review and planning meeting: agenda item 7</strong></td>
<td>The committee also advised that the previous report be largely distributed. The next review and planning meeting is scheduled for 24 to 28 November 2014. TCC advised that the period of the meeting be largely communicated to partners.</td>
<td>Not implemented - Meeting postponed for security reasons and cancelled because of budgetary constraints</td>
</tr>
<tr>
<td><strong>Elimination of Onchocerciasis infection and Interruption of Transmission: agenda</strong></td>
<td>The committee recommended complementing in 2014-2015, the epidemiological results with entomological transmission assessment survey to know the situation in the vectors, despite the financial challenges APOC is facing.</td>
<td>On-going - Entomological transmission assessments were implemented in 3 countries instead of the 10 originally planned due to the budget cuts that affected the evaluations</td>
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<td><strong>WHO Guidelines on verification of elimination of human Onchocerciasis</strong></td>
<td>Guidelines on verification of elimination of human onchocerciasis</td>
<td>Implemented - The Guideline Development Group was reconstituted and meeting held by the new group have finalized the guidelines</td>
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<tr>
<td><strong>Roadmap for alternative treatment strategies for the acceleration of the elimination of Onchocerciasis: 2014-2015</strong></td>
<td>Review the ATS document in all possible aspects.</td>
<td>On-going - A group of experts met in Ouagadougou from 3 to 7 March 2015 and reviewed the ATS document</td>
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<td><strong>Report on the review by apoc management of the financial content of 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th year progress reports as an Introduction to the review exercise: Agenda item 13</strong></td>
<td>TCC also recommended that APOC management i) presents the amount for field equipment in the CDTI implementation budget line ii) ensures that staff salaries from January onward are available before end of December</td>
<td>Implemented - Field Equipment budget is presented separately; CDTI implementation concerns only activities</td>
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</table>

Staff salaries were covered from January to December 2014; for 2015, based on the new orientation received from RD; reallocation will be done accordingly to a constraint of budget.
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<td>Review of 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th and 15th year annual technical reports: agenda item 14</td>
<td>i) Review of report of less than 7 years old projects</td>
<td>Implemented - Noted. Recommendations sent to the countries</td>
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<td></td>
<td>ii) Review online of reports of 7 years old projects</td>
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