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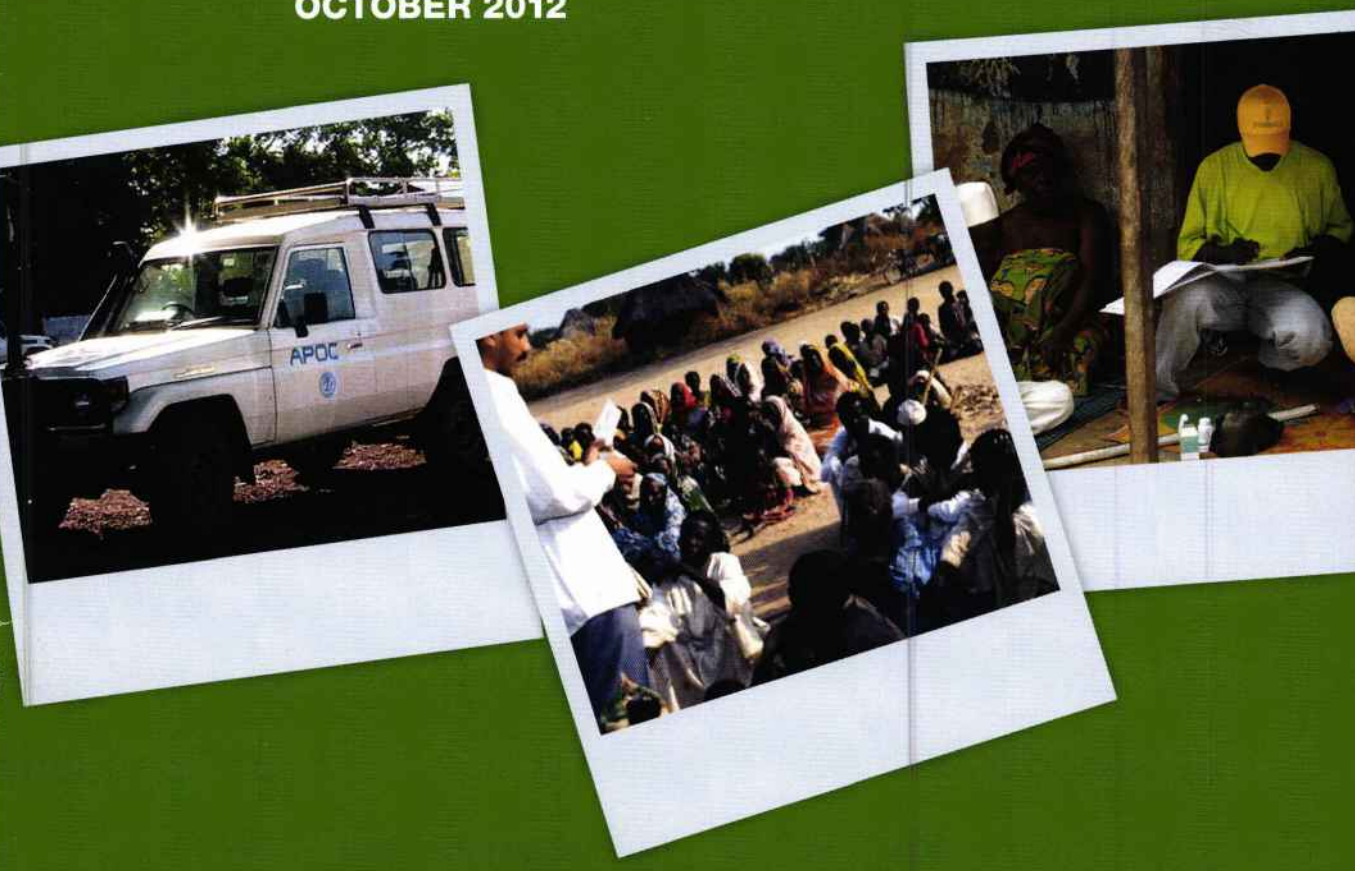
AFRICAN PROGRAMME FOR
ONCHOCERCIASIS CONTROL

CONCEPT NOTE

Role of APOC in the new strategic direction for Onchocerciasis elimination, co-implementation with Lymphatic filariasis and other health interventions, and Strengthening of community-level health systems

OCTOBER 2012



PROVISIONAL AGENDA ITEM 12

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1. Background

The Onchocerciasis Control Programme in West Africa (OCP) undertook regional and large scale fight against onchocerciasis in West Africa in 1974 using a vector control strategy. By 2002 OCP had succeeded in eliminating the disease as a public health, socio-economic and development problem in 10 out of 11 countries. This campaign was highly technical and expensive. In 1987, Merck & Co., Inc. committed themselves to provide ivermectin free of charge for as long as needed to onchocerciasis endemic countries. This made it possible to envisage the extension of onchocerciasis control activities to the remaining endemic countries in Africa.

The African Programme for Onchocerciasis Control (APOC) was launched in 1995 with the aim of establishing sustainable community-managed systems for ivermectin distribution in 19 countries that had not been covered by OCP and where the disease was a public health problem with significant socioeconomic consequences. APOC adopted Community-Directed Treatment with Ivermectin (CDTI) as its strategy.

APOC's Joint Action Forum has regularly discussed the prospects for elimination of onchocerciasis using CDTI. On the basis of the positive outcomes related to elimination of onchocerciasis infection and interruption of transmission[1] in sites that have implemented CDTI for at least 10 years with adequate treatment coverage (100% geographical coverage and at least 75% therapeutic coverage for the last 5 years), the Joint Action Forum at its 15th session encouraged APOC to continue efforts to collect more evidence through epidemiological evaluations in the coming years, and to use alternative strategies to accelerate progress towards elimination in troubled areas. During its 17th session held in December 2011, JAF agreed to extend APOC operations beyond 2015 in order to pursue coordinated efforts towards elimination of onchocerciasis, while supporting co-implementation of preventive chemotherapy for other selected NTDs, and increasing support to community-level health systems strengthening.

With the momentum initiated by WHO in 2003 for the control and elimination of selected NTDs, stakeholders have joined efforts to advocate for adequate resources to combat these diseases. The WHO Global Plan to combat neglected tropical diseases targets 17 diseases[2] that affect the poorest communities, mostly in Africa, Asia and South America. Stakeholder's collaboration efforts resulted in an important partner meeting held in January 2012 in London. The meeting issued the London Declaration to eradicate, eliminate and intensify control of selected NTDs by 2015 and 2020. At the same occasion, the WHO Roadmap to overcome the impact of NTDs was launched.[3] In addition, partners, including pharmaceutical companies, the Bill and Melinda Gates Foundation, United States, United Kingdom, United Arab Emirates and the World Bank, pledged to pursue and expand medicine donation programmes, and provide more than US$ 785 million to support Research and Development efforts and strengthen drug distribution and implementation programmes to tackle NTDs.

The purpose of this concept note is therefore to delineate APOC's role towards onchocerciasis elimination, and its contribution to the efforts aimed at eliminating Lymphatic filariasis and other selected NTDs, and strengthening health systems at community level. With a focused plan and working with other partners, two major and related intervention diseases – onchocerciasis and Lymphatic filariasis would have been eliminated in at least 23 countries by 2025.

[1] Diawara L, Traore' MO, Badji A, Bissan Y, Doumbia K, et al. (2009) Feasibility of Onchocerciasis Elimination with Ivermectin Treatment in Endemic Foci in Africa: First Evidence from Studies in Mali and Senegal. *PLoS Negl Trop Dis* 3(7): e497. doi:10.1371/journal.pntd.0000497

[2] Dengue, Buruli ulcer, Cutaneous leishmaniasis, Taeniasis/Cysticercosis/Echinococcosis/Hydatidosis, Foodborne trematode infections, Soil-transmitted helminthiases, Rabies, Blinding trachoma, Endemic trepanomatoses, Leprosy, Chagas disease, Human African trypanosomiasis, Visceral leishmaniasis, Dracunculiasis, Lymphatic filariasis, Onchocerciasis, Schistosomiasis.

[3] *Accelerating work to overcome the global impact of Neglected Tropical Diseases: A roadmap for implementation*, WHO (2012)

2. Situation analysis

Onchocerciasis is still prevalent, as an important public health problem, in 16 African countries where around 145 000 local communities are affected.[4] The total population at risk of the disease is estimated at 120 million persons in Africa. Onchocerciasis is the second world's leading cause of blindness of infectious origin. In addition, it causes severe itching and disfiguring skin lesions leading to stigmatization and social exclusion. Mass drug administration of Ivermectin to populations living in endemic areas is the current strategy to tackle the disease. In 2011, Ivermectin treatment was administered to 80 million individuals in APOC participating countries through the network of community-directed distributors (CDDs).[5] According to data reported by national onchocerciasis programme coordinators from 24 countries, 98 million people were treated in 2011 in Africa.[6]

Lymphatic filariasis is targeted for elimination by 2020. To achieve this, MDA has to reach 80% therapeutic and 100% geographic coverage for five to six consecutive years. A significant advantage of recently advanced filariasis control strategies is that they can be easily integrated into pre-existing Community directed Intervention programmes aimed at controlling other public health problems like onchocerciasis, malaria and intestinal parasites.

Role of community participation

Engaging the communities as partners in the control/elimination of NTDs significantly contributes to economize on treatment cost, and sustainably increase treatment coverage. To that end the communities should be well informed of their role as stakeholders in the control/elimination of NTDs. Furthermore, community awareness and willingness to control/eliminate NTDs helps minimize attrition of CDDs often related to incentive policy (in kind or cash) applied by various NTDs partners and others working at community level. In APOC's experience if the ratio of one CDD per 100 persons is reached, the workload of volunteers is reduced and consequently CDDs do not insist on requesting incentives.

Involvement of Non-governmental organizations

The development of partnership in resource-poor countries has been remarkable in the control of onchocerciasis over the last 20 years. The Onchocerciasis Control Programme in West Africa developed partnerships amongst endemic and donor countries, Non-governmental development organizations, and United Nations agencies. NGDOs and the WHO Prevention of Blindness Programme established the NGDO Coordination Group for Onchocerciasis Control in 1991. Among others, this group promotes worldwide interest and support for scaling-up ivermectin treatment against onchocerciasis. The group collaborates with Ministries of Health in endemic countries to establish a sustainable ivermectin distribution system. It mobilizes resources, serves as a conduit for operational issues, and facilitates documentation and dissemination of best practices. The NGDOs are also involved in the control of several other NTDs in addition to onchocerciasis.

Role of National health systems

Over the last three decades following the Alma Ata Declaration[7] health policies have moved away from curative to a more integrated approach to health care. Promotional, preventive and curative services have been organized in health districts and extended to the periphery through the designation of small health areas under the control of frontline health facilities or health centres. The health personnel in charge of these frontline health facilities are responsible for addressing most common health problems

4 WHO-Weekly epidemiological record 25 November 2011, 86th year. No. 48, 2011, 86, 541–556. http://www.who.int/wer

5 *APOC: The World Health organization: Year 2011 Progress Report*

6 *APOC: Report of Ninth meeting of the National Onchocerciasis Coordinators,* Ouagadougou 24-28 September 2012

7 www.who.int/hpr/NPH/docs/declaration_almaata.pdf

within the catchment area. This policy for integrating health activities within primary health care and strengthening the community involvement in the process was reinforced by the Ouagadougou Declaration.[8]

The Ministries of Health (MoH) have the ultimate responsibility for implementing national Onchocerciasis control/elimination Programmes. The MoH has the critical role to create a favorable environment for all partners; issue a policy for community-directed interventions for control/elimination of Neglected Tropical Diseases targeted by preventive chemotherapy (PCT-NTDs); ensure entry of ivermectin and other NTD medicines into the country without imposing duty, tax or other charges; chair and expand the National Onchocerciasis task force (NOTF) to include coordination of control/elimination of PCT-NTDs. The MoH also advocates for and mobilizes national financial contributions.

Contribution of Medicine donation programmes

In 1987, Merck committed to donate Mectizan (Ivermectin, MSD) for the treatment of onchocerciasis to all countries that need it for as long as necessary. In 1998 the donation was expanded to the treatment of Lymphatic filariasis (LF) in the African countries where onchocerciasis and Lymphatic filariasis are co-endemic. Other major medicine donation initiatives exist for tackling NTDs (for example Albendazole by GlaxoSmithKline; Azithromycin by Pfizer; Eflornithine, Melarsoprol and Pentamidine by Sanofi; Rifampicin, clofazimine and dapsone by Novartis; Mebendazole by Johnson & Johnson; Praziquantel by Merck KGaA; Suramin by Bayer). Medicine donation programmes are critical as they cover a major technical and financial component of the control and elimination of NTDs. Sustaining the action of such programmes is a key determinant for success in the fight against NTDs.

Perspectives for onchocerciasis elimination in Africa

Since 2008 APOC has been conducting epidemiological evaluations to assess the progress towards elimination of onchocerciasis infection in the sites that have benefited from 10 or more years of ivermectin treatment. The data analyzed to date indicates good progress towards elimination. As of December 2011, the findings from 31 sites suggest that onchocerciasis elimination has probably been achieved in 12 of those sites. An additional six sites experience a prevalence of infection close to zero and thus are close to elimination. The trends in nine other sites show that these are on track according to the predictions from mathematical modeling.

Data from epidemiological evaluations are also used to project for each area when ivermectin treatment can be safely stopped. This analysis reveals that 12 APOC participating countries may achieve national elimination, protecting more than 60 million persons, by 2020. If the ex-OCP countries are also considered, preliminary estimates indicate that another 11 countries may reach national elimination by 2020. Hence, with adequate support, a total of 23 African countries out of 31 endemic countries may achieve national onchocerciasis elimination by 2020.

The projections also indicate that five African countries will not achieve elimination by 2020 due to non introduction of CDTI in the presence of Loiasis co-endemicity, or as a result of inadequate treatment coverage and insufficient managerial capacity in post-conflict areas. These five countries need to be supported using alternative strategies in order to achieve elimination of onchocerciasis within the foreseeable future.

The challenges

Despite the evidence that CDTI has been sustainable and successful for a period of 16 years, it still faces some challenges which include: occurrence of severe adverse events due to ivermectin treatment for onchocerciasis in the presence of co-infection with *Loa loa* in some areas; lack of harmonized policies for CDDs incentives; competition for resources; donor-driven demands and need for rapid results; unavailability on time of medicines for other targeted NTDs for coordinated mass drug administration; lack of up to date mapping of NTDs, in particular LF in some countries; lack of integration of activities into national health systems; ineffective co-implementation of interventions.

[8] www.afro.who.int/phc_hs_2008/documents/En/Ouagadougou%20declaration%20version%20Eng.pdf

3. The new strategic direction for APOC action

The new paradigm

APOC's initial objective was to establish country-led sustainable systems for the control of onchocerciasis through mass treatment with Ivermectin. In this perspective APOC was due to close in 2015, and devolve the pursuit of control efforts to countries. Provided with evidence that onchocerciasis can be eliminated using mass treatment with ivermectin alone, the Joint Action Forum requested APOC to move towards onchocerciasis elimination. Realizing that the disease would not be eliminated by 2015, JAF directed APOC Management to submit a budgeted plan for extending support to countries to the period 2016-2025, hoping that the majority of African endemic countries would have achieved the elimination objective by end of that period. APOC's actions will be undertaken in an overall framework of intensified efforts against selected NTDs and strengthening of health systems.

The challenges of this new direction are numerous: countries will need to sustain high treatment coverage in all transmission zones till these reach the breaking point beyond which ivermectin treatment may be stopped without jeopardizing achievements to date; post-treatment surveillance will need to be undertaken in order to detect recrudescence or re-infection of freed areas. In addition, onchocerciasis elimination efforts must be undertaken in the overall context of WHO roadmap to overcome the global impact of NTDs, especially LF elimination. This means sustained commitment on behalf of all stakeholders: affected communities, governments of endemic countries, NGDOs, donors, scientific and technical partners.

Encouraged by the success of CDTI, the APOC partnership has embarked on broadening the scope of the strategy under the name of Community Directed Intervention (CDI) to address other health interventions. A training curriculum and a manual have been developed in collaboration with training institutions for use in the training of medical, nursing and public health students. It is anticipated that pre-service training will effectively contribute to the preparation and production of future generations of health personnel empowered to use the CDI strategy to scale-up priority health interventions at community level.

Package of interventions

The package of interventions should include not just medicines and health commodities but also all the components related to the delivery of those medicines/commodities (training, health education, monitoring and supervision, advocacy, coordination and partnership). Without these components the strategy is less likely to be effective and sustainable.

The CDI strategy and philosophy thrive on motivation, not necessarily monetary incentives, being provided by the communities requiring treatment to their selected community distributors. This is achieved by empowering the communities to take responsibility for their own health. It requires that these communities develop an understanding of the disease/health condition being targeted as well as a control strategy, and accept to change their traditional views on health services and relations between those services and the communities. A similar acceptance and understanding is also required from the health services.

The target NTDs and other health interventions currently considered appropriate for inclusion in the CDI package are: onchocerciasis, Lymphatic filariasis, Soil-transmitted helminth infections, Schistosomiasis, Trachoma, Vitamin A supplementation, Malaria (bed-nets, health education) and HIV/AIDS (education, sensitisation).

Intensifying field activities

The new direction set for APOC by the Joint Action Forum requires revisiting traditional approaches and adopting alternative and innovative strategies where necessary, in order

to ensure that all onchocerciasis transmission zones are covered, multiple health interventions are co-implemented as appropriate, and a lasting impact is made on strengthening health systems at community level.

Boosting community participation

Endemic communities remain the most important partners. They will continue to be responsible for administration of ivermectin treatment and its sustainability, and for co-implementing activities towards control/elimination of other NTDs. In this way communities will be involved in important activities of community health care. The CDDs will be responsible for reaching high treatment coverage and compliance to ivermectin treatment. Therefore, training and retraining of CDDs will be intensified to reach these objectives. Communities will be sensitized and mobilized to consolidate ownership and empowerment of women, who are generally the first health care providers, and youth in order to achieve the appropriate number of community-directed distributors (1 CDD/100 targeted persons) adequate to conduct regular mass drug distribution.

Extending treatment to all transmission zones

Where there is local transmission, cross-border foci and long-distance vector migration, epidemiological and entomological evaluation will be carried out to identify such areas and ivermectin treatment will be extended to cover the total targeted population at risk. To achieve this objective cross-country intervention teams will be set up and trained for joint monitoring and evaluation of the impact of treatment.

Applying alternative approaches

In areas where high treatment coverage is restricted because of onchocerciasis and Loiasis co-endemicity, Community-directed distributors will be trained in early detection of severe adverse events and equipped with means for rapid reporting and referral of cases to health facilities. Referral health centres will be identified, equipped for management of neurological cases including nursing as well as laboratory facilities and expertise for conducting calibrated blood smears for identification of *Loa loa* microfilaria. In addition, alternative treatment approaches, such as use of other medicines shown to be effective and safe for treatment of large populations, will be tested and introduced.

In areas with very high pre-control endemicity levels or in projects that started ivermectin distribution late or have low treatment coverages intensified efforts to improve compliance will be undertaken including providing technical assistance (Technical advisors) and implementation of twice a year treatment directed by communities.

Addressing conflict zones

Where Ivermectin distribution is hampered because of conflicts, civil society groups and goodwill ambassadors will be mobilized, sensitized and trained for implementation of ivermectin treatment and distribution of additional medicines for other PCT-NTDs.

Co-implementation (in particular LF elimination)

CDI has proven to be effective in delivering multiple health interventions, e.g. NTD control/elimination programmes, vitamin A supplements and delivery of bednets. It is an effective community-driven strategy which strengthens the national health system from the bottom up. There has been insufficient coordination and communication between onchocerciasis and Lymphatic filariasis programmes despite the fact that ivermectin is used in common for tackling both diseases (together with Albendazole for LF).

Co-implementation presents an opportunity for strengthened cooperation between the two disease programmes through data sharing and joint disease mapping, thus providing a more rational basis for planning the elimination of the two diseases. For example, in areas where onchocerciasis control programmes have delivered ivermectin for more than 10-15 years and where onchocerciasis elimination is close to being achieved, it is most likely that Lymphatic filariasis would also have been eliminated.

In areas where onchocerciasis and Lymphatic filariasis are co-endemic the two programmes will carry out joint interventions to update disease mapping and to scale up treatment, particularly in untreated onchocerciasis (low endemicity) areas where Lymphatic filariasis is prevalent.

Sharing data and coordinating mass treatment and epidemiological evaluations will allow significant cost-saving and more efficient programme planning. The main activities for co-implementation will be:

- enhanced collaboration and coordination between APOC and Lymphatic filariasis Programmes;
- support to integrated mapping;
- joint epidemiological evaluations in areas of co-endemicity, monitoring, supervision and post treatment surveillance;
- expanded use of the CDI strategy in non onchocerciasis endemic areas for the control of other NTDs especially LF;
- collaboration in vector monitoring;
- financial and logistic support to countries within the mandate of APOC;
- technical and financial support to Universities in Africa for mainstreaming the CDI strategy in their curricula.

Strengthening of community health system component

The Ouagadougou Declaration on Primary Health Care and health systems is a key statement of political commitment by African leaders to address the problems of struggling health systems. It outlines strategies and actions for implementation. The Declaration encourages countries to focus on the following priority areas: leadership and governance for health; health services delivery, human resources for health, health financing, health information and health technologies, community ownership and participation, partnerships for health development, and research for health.

CDI, as promoted by APOC, has a potential contribution to make not only to community participation but also to each of the priority areas. It is important that the potential contribution of CDI be seen in the context of national health systems and not as a separate or independent approach to community health.

In this perspective, in collaboration with concerned AFRO programmes, APOC will focus on:

- contributing to developing community health policies and strategies to promote community ownership and participation through building institutional and individual capacities in countries;
- institutionalizing monitoring of community-based health activities;
- supporting countries to strengthen coordination and collaboration with civil society organizations particularly community-based organizations and NGOs in community health development;
- providing training modules for district level health planning and training of trainers;
- supporting countries in conducting district health system performance assessments and evaluations.

Research

APOC will continue to support participating countries in undertaking operational research to improve programme performance and for sharing best practices. At the same time APOC will pursue collaboration with academic and research institutions engaged in the development of new tools and medicines for onchocerciasis elimination.

Monitoring, Evaluation and Surveillance

Independent monitoring

The epidemiological evaluations conducted in APOC participating countries revealed that the projects which had not shown progress towards onchocerciasis elimination are those where treatment coverage has been lower than planned. In this context, independent monitoring will be intensified to confirm reported coverage data on regular basis for more accurate projections of end of treatment in a given project.

Evaluation

Special emphasis will be put on strengthening country capability in conducting onchocerciasis and Lymphatic filariasis surveillance/evaluation and integration of this activity into national health systems. Training and logistic support to national health systems will be reinforced.

Epidemiological and entomological evaluations will be critical to assess the extent to which CDTI projects are moving towards the breakpoint for elimination of infection with *Onchocerca volvulus*. Once the decision to

stop Ivermectin treatment in a CDTI project having achieved interruption of transmission is made, post treatment surveillance has to be conducted for a period of three years to confirm elimination. In the long-term, routine surveillance and evaluation will be undertaken within the context of national disease surveillance systems aiming at detecting possible recrudescence of infection.

The performance of the Programme will be monitored by assessing its contribution to strengthening country leadership for onchocerciasis elimination; establishing CDTI in all onchocerciasis transmission zones; determining where and when to stop ivermectin (or alternative product) mass administration; supporting co-implementation of activities towards elimination of selected NTDs; strengthening of health systems at community level; and safely exiting from countries. Appropriate indicators for elimination will be refined or developed to that effect.

Revitalizing the partnership

Relationships with broader NTDs alliances

APOC will advocate for the use of the CDI strategy in the control and elimination of other NTDs where appropriate. In so doing there is need to ensure that an effective and broad partnership is built around the vision of eliminating onchocerciasis and other NTDs, good governance, equity, collaboration and accountability.

This will include partnerships for:

- optimizing lessons learnt; collaborative mechanisms and coordination to maximize synergies;
- health education/promotion;
- social mobilization/sensitization;
- ensuring accountability;
- research.

Developing a communication strategy and plan

The new strategic direction of APOC to attain onchocerciasis elimination, with emphasis on co-implementation for PCT-NTDs and health system strengthening will require among other things an intensification of control activities in all projects and endemic countries. Therefore there is need to develop a robust communication strategy and a communication plan to mobilize all stakeholders.

Revisiting institutional arrangements towards a broader NTDs perspective

WHO/AFRO NTD Regional programme collaborated with WHO/HQ and APOC on a Joint Plan for the Control of NTDs 2010–2015. The plan targets the following diseases: Buruli ulcer, Guinea worm, Leprosy, Lymphatic filariasis, onchocerciasis, Human rabies, Human African Trypanosomiasis, Schistosomiasis, Leishmaniasis, Soil-transmitted helminths, Trachoma, Treponematosis (yaws).

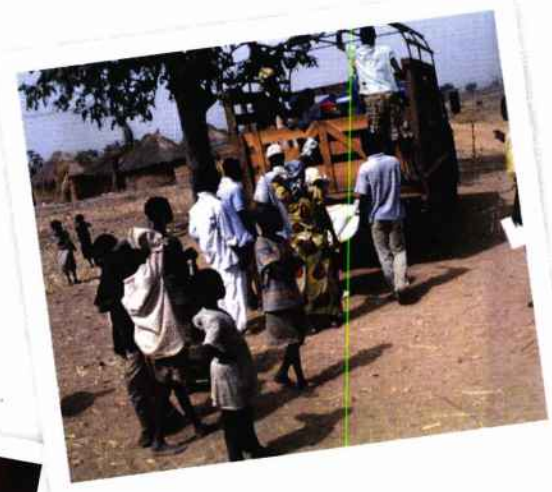
In June 2012, WHO/AFRO convened a NTDs stakeholder's meeting in Accra, Ghana, on the theme of *Working Together for greater Impact on NTDs*, to review country integrated NTDs plans from 32 African countries and discuss ways and means to support the implementation of these plans. The meeting proposed the adoption in the near future, by the concerned countries and their partners, of the Accra call to Action, at the occasion of a session of the WHO Regional Committee for Africa. The renewed commitment of the partners to alleviating the impact of NTDs by 2020 necessitates strengthening collaboration among all stakeholders. Roles and responsibilities need to be clearly spelled out and well understood.

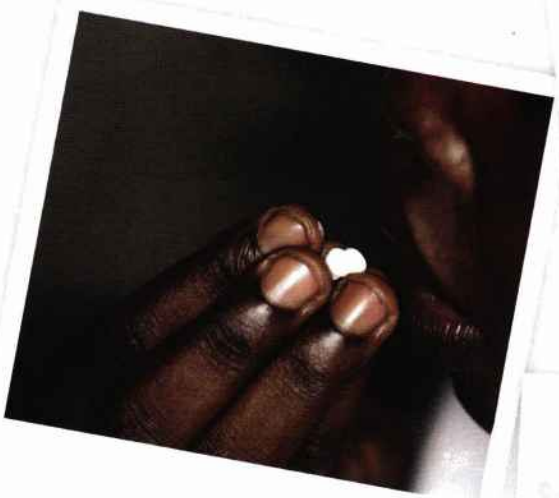
APOC's main priority remains onchocerciasis elimination, recognizing that this cannot be achieved without coordination and co-implementation with LF elimination efforts. APOC's expertise in CDTI and disease mapping will also be made available for a broader action against other NTDs. Likewise, the experience of APOC's Trust Fund could be used to mobilize financial support for other PCT-NTDs, and the experience of APOC's governance arrangements could help facilitate interventions with a broader NTDs perspective. Such developments would impact on APOC's institutional arrangements. Therefore the necessary changes will be proposed for discussion to all stakeholders in due time.

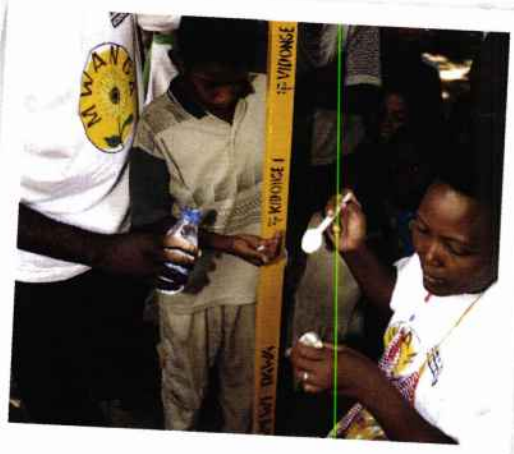
4. The way forward

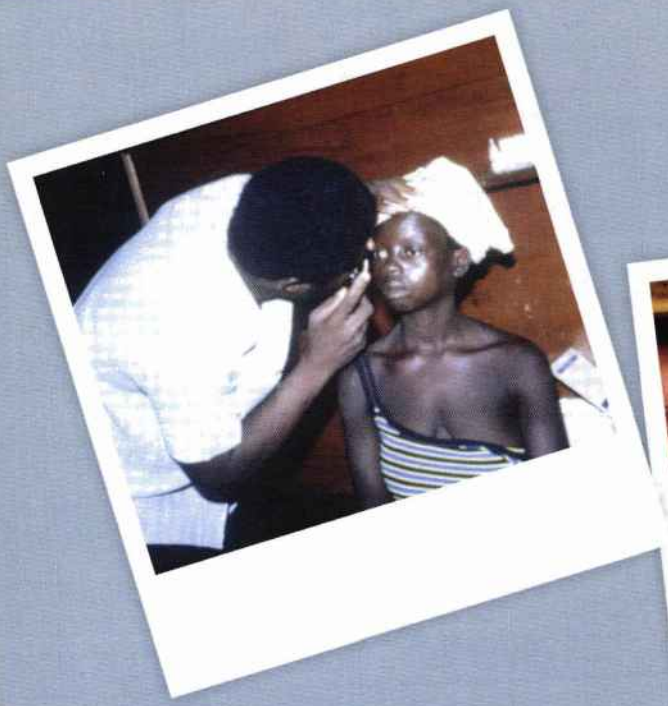
This concept note identifies the actions to be undertaken towards onchocerciasis elimination and the potential areas for APOC collaboration with other NTD programmes in Africa and provides the background for developing APOC's onchocerciasis elimination plans. The contribution of APOC to the overall efforts towards elimination of other NTDs includes, among others: integrated mapping of NTDs; strengthening coordination for co-implementation especially with LF; advocacy and resource mobilization; delivery of medicines and commodities through the CDI structure and CDD network; community-level monitoring and supervision of intervention, introduction of CDI in the curricula of training institutions, and evaluation.

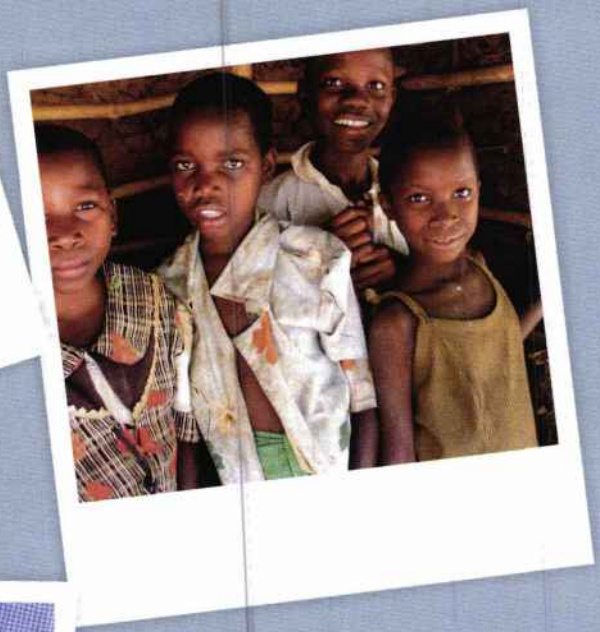
In the context of renewed global commitment to support the control/elimination of NTDs and enhanced regional coordination of country integrated NTDs plans, APOC will contribute experience in implementation of the CDI strategy for PCT-NTDs, as well as scaling-up other relevant health interventions at community level.

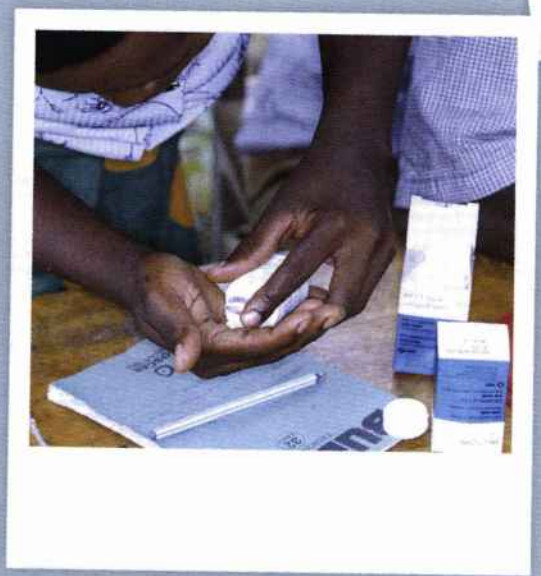


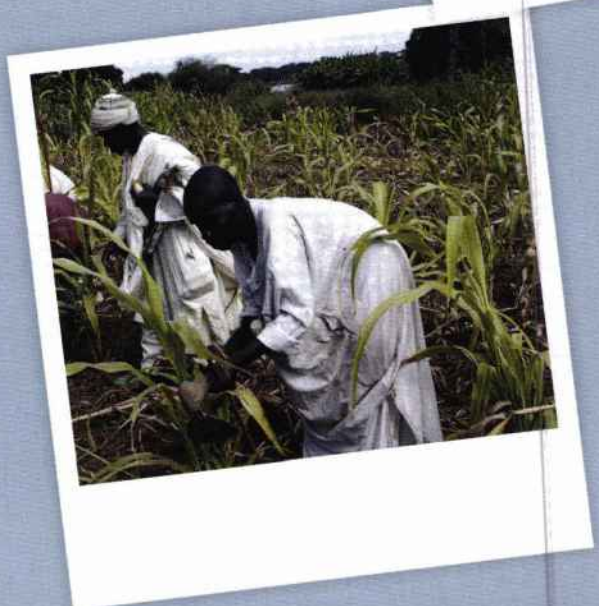












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