



**World Health
Organization**

20, AVENUE APPIA - CH-1211 GENEVA 27 - SWITZERLAND - TEL CENTRAL +41 22 791 2111 - FAX CENTRAL +41 22 791 3111 - WWW.WHO.INT

Tel. direct: +41 22 791 3841
Fax direct: +41 22 791 4869
E-mail :

In reply please
refer to: V2 446 24

Your reference:

Africa Fighting Malaria
1050 Seventeenth Street, NW, Suite 520
Washington DC, 20036
USA

3 May 2007

Dear Sir/Madame,

Please find enclosed the WHO response to the *Africa Fighting Malaria Occasional Paper on WHOPES and Its Impact on Long-lasting Insecticidal Net Availability*, published by Philip Coticelli on 23 April 2007. WHO is of the opinion that the conclusions and recommendations made by Coticelli are incorrect and could have serious negative repercussions on public health. For this reason, we trust you will have the courtesy to publish our rejoinder.

With best regards.

Your sincerely,

Dr Lorenzo Savioli
Director
Department of Control of Neglected Tropical
Diseases

cc: Mr Philip Coticelli, Africa Fighting Malaria

In response to the Africa Fighting Malaria Occasional Paper on WHOPES and Its Impact on Long-lasting Insecticidal Net Availability, published by Philip Coticelli on 23 April 2007,¹ the World Health Organization (WHO) should like to point out that this article neither accurately reflects the purpose and objectives of the WHO Pesticide Evaluation Scheme (WHOPES) nor the procedures followed by the Scheme.

Coticelli's Executive Summary:

1. states that, between 2001 and 2006, WHOPES recommended two long-lasting insecticidal mosquito net (LN) products;
2. concludes that WHOPES data collection and review could take six months but that, in practice, due to systemic delays, it will have taken recent applicants two years on average to receive interim recommendations; and
3. recommends that the Roll Back Malaria partnership should immediately revise its policy of procuring WHOPES-recommended LNs.

The statements referred under 1 and 2 are incorrect and misleading. WHO is of the opinion that the recommendation made by Coticelli on the basis of these incorrect and misleading statements could have serious negative repercussions on public health.

WHOPES is the only international programme that coordinates independent testing and evaluation of pesticides for public health use. The Scheme (established by WHO in 1960) functions in close collaboration with national disease and pest control programmes, national pesticide registration authorities, several international and regional organizations and institutions concerned with pesticide management, legislation and regulation, research institutions and industry.

Currently, the Scheme comprises a four-phase evaluation and testing programme that studies the safety, efficacy and operational acceptability of public health pesticides. In addition, WHO develops specifications for the quality control of pesticides through WHOPES. WHOPES also collects, consolidates, evaluates and disseminates information on the use of public health pesticides. WHO recommendations issued as part of the Scheme aim to facilitate the registration and use by WHO Member States of quality-assured public health pesticides².

The WHOPES evaluation, including for (LNs),^{3,4} follows published guidelines and procedures that have been developed in consultation with WHO Collaborating Centres, research institutions and the pesticide industry.

Industry participates in the testing and evaluation of public health pesticides by WHOPES on a *voluntary basis*. The WHOPES plans, requirements and timelines for the full testing and evaluation of a pesticide product is planned and agreed upon by the manufacturer, following the review of the data-package submitted by industry in support of their product.

¹ Available at http://www.fightingmalaria.org/pdfs/AFM_WHOPES_LLN.pdf

² <http://www.who.int/whopes/en/>

³ *Guidelines for laboratory and field testing of long-lasting insecticidal mosquito nets*. Geneva, World Health Organization, 2005 (WHO/CDS/WHOPES/GCDPP/2005.11; available at http://whqlibdoc.who.int/hq/2005/WHO_CDS_WHOPES_GCDPP_2005.11.pdf).

⁴ *Report of the meeting on the development of guidelines for testing and evaluation of long-lasting insecticidal mosquito nets, WHO/HQ, Geneva 4–7 April 2005* (WHO/CDS/WHOPES/GCDPP/2005.14; available at http://whqlibdoc.who.int/hq/2005/WHO_CDS_WHOPES_GCDPP_2005.14.pdf).

Between 2001 and 2006, three LN products (Olyset; PermaNet and Interceptor) received WHOPES interim recommendations, not two, as stated by Coticelli. Moreover, the article ignores the fact that an additional three LN products underwent WHOPES efficacy testing as part of the requirement for *extension of the WHO specifications*⁵ for deltamethrin long-lasting (coated) insecticidal mosquito nets the results of which appear in the same WHOPES report as that in which the assessment of Interceptor⁶ was published. WHOPES also finalized the evaluation of, and made recommendations on use of an additional 15 public health pesticides products during the same period.

WHO is not a regulatory authority. The regulatory approval of pesticide products is the sole prerogative of national authorities. WHOPES recommendations aim to facilitate pesticide registration and use by WHO Member States, and must be based on sufficient data and information. In response to the urgent needs of public health programmes, LNs have been the only exception in the 45 years of WHOPES history for which a fast-track evaluation system has been established and "interim recommendations" have been given for their use. These interim recommendations follow specific criteria detailed in the *Guidelines for laboratory and field testing of long-lasting insecticidal mosquito nets* cited above.

Coticelli (2007) argues that WHOPES data collection and review could take six months but that, in practice, it has taken recent applicants an average of two years to receive interim recommendations. Noting that the majority of LN submissions to WHOPES by industry have had limited data in support of the efficacy of their product and that it has therefore been necessary to conduct full laboratory and field testing, the six-month evaluation time proposed by the author is unrealistic. It ignores not only the time needed for testing and evaluation of the product in accordance with the Guidelines, but also fails to consider the time needed for the conclusion of agreements with research institutions; for obtaining relevant national and ethical clearances; for the payment by industry of the cost of the testing and evaluation process and last but not least, for the provision of the testing material.

To save time in the evaluation of LNs, many manufacturers have proposed the parallel laboratory and small-scale field testing. However, part of the data used in laboratory testing is necessary for planning field evaluations (as detailed above for laboratory and field testing of LNs), and also for validating some of the assumptions made in the risk assessments (e.g. the "surface" concentration of insecticide between washes), which is necessary before a field trial can be organized.

We note with concern the market-related issues raised by Coticelli, i.e., the requirement for WHOPES testing and evaluation has restricted these products from participating in most public tenders; has restricted competition; and has kept prices high. WHO however believes that it would be irresponsible for public funds to be used for the purchase of LNs without adequate safety and efficacy assessments. Given the limited resources and infrastructure of malaria endemic countries to carry out proper product assessments, there is a clear risk that substandard and

⁵ *Manual on development and use of FAO and WHO specifications for pesticides*. March 2006 revision of the first edition, Rome, Food and Agriculture Organization of the United Nations and the World Health Organization, 2006 (available at http://whqlibdoc.who.int/publications/2006/9251048576_eng_update2.pdf)

⁶ *Report of the 10th WHOPES Working Group meeting – Review of Spinosad 0.5% GR and 12% SC, Lambda-Cyhalothrin 10% CS, K-O TAB 1-2-3[®] Interceptor[®]*. 11–14 December 2006. Geneva, World Health Organization, 2006 (WHO/CDS/NTD/WHOPES/2007.1; available at <http://www.who.int/whopes/recommendations/wgm/en/>).

counterfeit products will enter the market and endanger the lives of millions of people, unless internationally agreed quality-control standards are in place.

One of the main activities of WHOPES following its safety and efficacy evaluation of public health pesticides is to develop, the standards and test methods for their quality control⁷. For none of the LNs listed in the Coticelli article, such specifications have as yet been developed (two have requested WHOPES to postpone the review of their data package by the FAO/WHO Joint Meeting on Pesticide Specifications to June 2008, due to incomplete data packages in support of the specifications, and the other three are in progress). It is therefore unclear how LN stocks of manufacturers awaiting WHO recommendations, as Coticelli states, can be purchased by donors and institutional buyers in the absence of internationally acceptable quality-control standards. However, the absence of WHO recommendations should not be seen as a constraint to procurement of those LNs by national programmes, provided that their safety and efficacy have been adequately assessed by national authorities.

WHO recommendations on the use of public health pesticides are valid ONLY when linked to WHO specifications for their quality control. The criteria and the test methods in support of the specifications must be developed and proposed by industry for independent evaluation and validation by WHO. Lack of resources of many LN manufacturers, and the fact that they originally are or were fabric manufacturers with very limited experience in the use and management of insecticides, has significantly delayed the development of such specifications. When such specifications are available, national programmes and authorities, donor agencies and institutional buyers are strongly advised to independently verify the quality of each consignment to ensure their compliance with the specifications. Coticelli's citation of Graham et al (2005) in the report that deltamethrin content in an unwashed PermaNet[®] 2.0 ranged from 27 to 142 mg/m² is a good example of the need for quality control precisely because the product clearly failed to meet the WHO specification⁸.

Coticelli proposes that UNICEF supply agreements should be a guide to institutional buyers and donor agencies for the procurement of LNs. He adds that UNICEF factory and product evaluations could perform a formal regulatory role for new and existing LNs in countries lacking regulatory capacity. While the procedure and requirements for "product evaluations" by UNICEF is not provided in the report, it is not clear how quality control of LN products can be ensured without internationally acceptable quality-control standards and test methods, and without relevant safety and efficacy assessments, as carried out by WHOPES. Moreover, WHO is mandated to develop specifications for public health pesticides and advise countries on their safe and effective use.

WHOPES will continue to work closely with the malaria community to ensure the availability of safe and effective public health pesticides.

⁷ <http://www.who.int/whopes/quality/en/>

⁸ WHO specifications and evaluations for public health pesticides - deltamethrin. Geneva, World Health Organization, last update July 2006 (available at http://www.who.int/whopes/quality/deltamethrin_eval_july_2006_in.pdf).