MINISTRY OF HEALTH
NATIONAL MATERNAL AND CHILD HEALTH CENTRE
KINGDOM OF CAMBODIA

NATIONAL VWAWN A POLICY

AND

IMPLEMENTATION DOCUMENT

PHNOM PENH, AUGUST 1994
1.0 BACKGROUND:

Vitamin A deficiency (VAD) has long been suspected as a public health problem in part or all of Cambodia. Two Khmer terms describe “nightblindness”, an early symptom of VAD. These are “kwack moin” (‘chicken blindness’) and “10’nget moin” (‘evening chicken’). In 1988, the World Health Organization (WHO) stated that there was a high probability that Cambodia had a significant VAD problem.

In 1990, the first national vitamin A workshop sponsored by World Vision International (WVI) and Helen Keller International (HKI) was held. Workshop recommendations included: valid population-based assessment of the VAD problem; surveying children in random samples of limited regions from both rural and urban areas; and, immediate implementation of national treatment protocols even without survey results. Interim guidelines were developed for the treatment of clinical eye symptoms and signs of xerophthalmia as well as children with measles and severe malnutrition.

In 1995, a prevalence survey was conducted by the Ministry of Health/National Centre for Hygiene and Epidemiology (MOH/CHNHE) with assistance from KHI. Areas were selected to obtain approximate regional representation of the country considering factors such as which areas having potential VAD problem, security and accessibility.

In accordance with the recommendation of the International Vitamin A Consultative Group (IVACG), the survey was conducted in what was thought to be the height of xerophthalmia season, i.e., the late dry and early rainy seasons.

Following WHO recommendation, the targeted group was children 1-6 years old. The total number of children surveyed was 10,116. The children were assessed for nightblindness, Bitot’s spot and corneal xerosis.

In every site surveyed, except Phnom Penh, the minimum WHO public health problem standard for Bitot’s spot (0.5%) was either matched or exceeded. In all sites, the nightblindness prevalence was much more than the WHO standard (1%). The total nightblindness prevalence was 5.6% i.e almost six times the...
WHO standard (final survey results-Appendix 1). This is now quoted as the current official MOH figure. Recent WHO publication on indicators (January 1994) has placed Cambodia in category 1, i.e. severe VAD.

In December 1493, the second national vitamin A workshop, sponsored by the United Nations Children's Fund (UNICEF) and HKI, was held in Phnom Penh. Results of the survey were formally presented. Proceedings of the workshop are now available in English and Khmer.

This document is a synthesis of workshop recommendations on policy and strategies for a national Vitamin A programme. Provisions in this document have been presented to and endorsed by the MCH Sub-Committee.

2.0 POLICY STATEMENT:

2.1 Political Commitment:

The Kingdom of Cambodia, through the ministry of Health/National MCH Centre, hereby makes a political commitment to improve the health and quality of life of Cambodian children by endorsing and implementing a national plan of action to ultimately eliminate Vitamin A deficiency.

In making this political statement, the MOH/NMCHC recognizes limitations in both the health delivery structure and resources to implement the proposed plan of action. It will work, however, according to its present capacity with the goal to further develop strategies as resources improve. The MOH/NMCHC will commit resources from yearly allocations received from the Royal Government to complement external aid.

Likewise, the MOH/NMCHC recognizes the multi-sectoral nature of nutrition and will cooperate with other government and non-government sectors/organizations in improving the nutritional status --- especially micronutrient intake, --- of Cambodian children.

Along with Vitamin A, the MOH/NMCHC will also develop strategies on other micronutrient deficiency Control activities, namely Iodine, Iron and Folic Acid.

Finally, in developing strategies for a national plan of action, the MOH/NMCHC acknowledges the WHO for standards/guidelines and will conform to country-specific recommendations given Recognized consultants/specialists.

(National Vitamin A policy and Implementation Document 1994)
2.2 **Target Population:**

It is policy for the MOH/NMCHC to target, the following VAD at-risk populations:

2.2.1 **Priority 1: Children ages from 6 months to 6 years**

Vitamin A deficiency increases mortality among children 6 months to 6 years of age so that improving the vitamin A status of deficient children increases their chance of survival.

2.2.2 **Priority 2: Lactating mothers.**

Administration of vitamin A at delivery or during the 2 months following delivery will raise the concentration of vitamin A in the breast milk and therefore help to protect the breast-fed infant.

2.3 **Major Strategies:**

It is policy for the MOH/NMCHC to plan on and implement the following strategies according to structural capacity and resources available:

2.3.1 **Priority 1: Disease-targeted distribution:**

A disease-targeted distribution will involve the administration of a high dose of vitamin A to individuals at special risk of developing vitamin A deficiency. This is a top priority and will be implemented all over the country as soon as possible.

**Infants and children:**

a. With acute or prolonged diarrhea (14 days or more)
b. With acute lower respiratory infections (ARI)
c. With severe protein-energy malnutrition (PEM) presenting for treatment at a health centre
d. With clinical measles
e. With clinical manifestations of Vitamin A deficiency, i.e. nightblindness, xerophthalmia.

2.3.2 **Priority 2: General prevention:**

Universal distribution for prevention in childhood involves the periodic administration of large doses of vitamin A to all children under 6 years old in communities at risk of VAD and a large dose to lactating mothers during the first 2 months after delivery.

(National Vitamin A Policy and Implementation Document 1994)
The MOH/NMCHC acknowledges that universal distribution is very expensive and requires a well-functioning structure and a lot of resources which Cambodia does not have at present. Following specialist advice, distribution for general prevention should be limited where the structure is adequate, i.e., where non-government organizations are operating to strengthen local health services. As NGOs are expected to operate within a limited “project” time frame, this priority will be considered so that there will be measures to sustain Vit A distribution.

2.3.3 **Priority 3: community-based food and education approaches:**

While the MOH/NMCHC will not take a lead role in multi-sectoral community-based and public education interventions, it will ensure active participation in Government-organized committees/working groups designated to address these. The main interventions will stress health education, food production, consumption and promotion of breast feeding.

2.4 **Program Management:**

It is policy for the MOH/NMCHC to establish a system of management and administration in order to monitor, evaluate and further develop VAD-related activities:

2.4.1 **National Nutrition Program Manager:**

The MOH/NMCHC Director will appoint a National Nutrition Program Manager. A working group will be formed, with approval by the NMCHC Director and will function according to NMCHC guidelines/terms of reference.

2.4.2 **National Nutrition Working Group:**

The working group will be composed mainly of national officers to be designated by the NMCHC Director. Expatriate technical advisers will be invited to be part of the working group according to the discretion of the NMCHC Director.

The Nutrition working Group will be the focal body that will be responsible in the coordination, monitoring and evaluation of national Vitamin A activities. It will then be responsible for the following:

a. Policy formulation
b. development of clinical protocols/guidelines
c. development of information-education-communication (IEC) materials

*(National Vitamin A Policy and Implementation Document 1994)*
d. development of training curricula and materials

e. development of overall strategies and setting goals

f. establishing/reviewing indicators to monitor over time

g. Coordination with the Ministry of Health on vitamin A supply planning, procurement and distribution,
h. coordination with donor agencies, e.g. UNICEF, Japanese International Cooperation Agency (JICA),
Australian International Development Assistance Bureau (AIDAB) and HKI, in terms of resources related to the prevention and control of VAD

i. other management/administrative functions as required.
5.0 **APPENDICES:**

Appended are the following:

1. Final 1993 Vit A Survey Results
2. National Vit A Implementation Plan (Gantt Chat)
3. List of acronyms
4. NMCHC Management and Administrative structure
5. Treatment and universal distribution protocols
6. Micronutrient (vit A) training schedule
7. Vitamin A capsule procurement and distribution schedule
8. List of working documents
9. Micronutrient working Group
10. Budget

**Document Draft finalized:**
31st August 1994, Phnom Penh, Kingdom of Cambodia

**REVIEWED AND APPROVED:**

**DR. ENG EUOT**
Director
NATIONAL MATERNAL & CHILD HEALTH CENTRE

**MR. MAM BUN EENG**
Undersecretary of State
Ministry of Health

(National vitamin A Policy and Implementation Document 1994)
APPENDIX 1: FINAL 1993 VIT A SURVEY RESULTS

HKI/MOH CAMBODIA VAD SEMVEY FINAL RESULTS W/O CR
MAY-AUGUST 1993

These results are without the final confidence intervals so should not be considered publishable outside HKI/MOH.

<table>
<thead>
<tr>
<th>PROVINCE</th>
<th>CHILD</th>
<th>XNB</th>
<th>XIB</th>
<th>X2</th>
<th>X3A</th>
<th>XS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAKEO</td>
<td>2,081</td>
<td>192</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(9.2%)</td>
<td>(.48%)</td>
<td>(.05%)</td>
<td></td>
<td>29%</td>
</tr>
<tr>
<td>RATKIRI</td>
<td>1,608</td>
<td>32</td>
<td>15</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.0%)</td>
<td>(.73%)</td>
<td>(.06%)</td>
<td></td>
<td>(.12%)</td>
</tr>
<tr>
<td>KOH KONG</td>
<td>2,062</td>
<td>91</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4.4%)</td>
<td>(7.3%)</td>
<td>(.29%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KP. THOM</td>
<td>2,299</td>
<td>209</td>
<td>16</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(9.1%)</td>
<td>(.70%)</td>
<td>(.09%)</td>
<td>(.04%)</td>
<td>(.13%)</td>
</tr>
<tr>
<td>P. PENH</td>
<td>2,066</td>
<td>40</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.9%)</td>
<td>(.6%)</td>
<td>(.04%)</td>
<td>(.01%)</td>
<td>(.19%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10,116</td>
<td>564</td>
<td>56</td>
<td>4</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(5.6%)</td>
<td>(.6%)</td>
<td>(.04%)</td>
<td>(.01%)</td>
<td>(.19%)</td>
</tr>
</tbody>
</table>

WHO PH     | 1.0%  | .5%   | 01.0% | 01%  | .05%|

STANDARD

*=There were measles- epidemics in these provinces. in 1993.

The night blindness rates have dropped because children, with more severe eye signs were counted for both conditions in the preliminary, results. Also we discounted children who had conjunctivitis at the same time because it was thought the mother may consider the child night blind because the child had a difficult time seeing due to the eye infection.

The active corneal lesion rate X2+X3A+X3B is now 05%; this five times the WHO Public Health problem standard !!!

Age relationships of eye signs and night blindness will be presented elsewhere. Most VAD signs were present in children aged 2-5 years.
### GANTT CHART - NATIONAL VIT A IMPLEMENTATION PLAN

<table>
<thead>
<tr>
<th></th>
<th>ACTIVITY</th>
<th>31</th>
<th>32</th>
<th>33</th>
<th>34</th>
<th>35</th>
<th>36</th>
<th>37</th>
<th>38</th>
<th>39</th>
<th>40</th>
<th>41</th>
<th>42</th>
<th>43</th>
<th>44</th>
<th>45</th>
<th>46</th>
<th>47</th>
<th>48</th>
<th>49</th>
<th>50</th>
<th>51</th>
<th>52</th>
<th>53</th>
<th>54</th>
<th>55</th>
<th>56</th>
<th>57</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Legislation/Policy:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>National Survey</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>National Workshops</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>Policy Development</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>Plan/Policy Approval</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>VIT A Campaign/Program:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Promotion</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>VIT A Allocation (Burn)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td>VIT A Distribution (Burn)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>2.4</td>
<td>VIT A Form Designed</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5</td>
<td>VIT A Form Ordered</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>Education &amp; Training:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>Curriculum Development</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>Training Schedule</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>4.0</td>
<td>Management, Monitoring and Evaluation:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1</td>
<td>Monitoring</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>Evaluation Plan</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3</td>
<td>Annual Reports</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.9</td>
<td>Multi-sectoral Links:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.9.1</td>
<td>Multi-sectoral Partnerships</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>1.9.2</td>
<td>Community-based Interactions</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

* Compiled Workshop Proceedings (in English and French) available from the National MCH Centre.

** Proposed Treatment Distribution Plan appended here. This is based on the UNICEF/WHO Essential Drug distribution plan.

*** Special Distribution (Prevention) is according to MCHC plan.

**** Proposed Training Plan/Schedule appended here.

***** Links established with government departments/agencies (agriculture, education, women’s association, rural development) and non-government agencies (multilateral, bilateral and NGOs: UNICEF/Family Planning [FP], JICA, IDAG, EAI), national authority organisation and World Food Programmes (WFP/WPR).
## APPENDIX 3: LIST OF ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDAB</td>
<td>Australian International Development Assistance Bureau</td>
</tr>
<tr>
<td>ARI</td>
<td>Acute Respiratory Infections</td>
</tr>
<tr>
<td>CMS</td>
<td>Central Medical Stores</td>
</tr>
<tr>
<td>CNHE</td>
<td>Centre for Hygiene and Epidemiology</td>
</tr>
<tr>
<td>FAO</td>
<td>Food Authority Organization</td>
</tr>
<tr>
<td>HKI</td>
<td>Helen Keller International</td>
</tr>
<tr>
<td>IEC</td>
<td>Information-Education-Communication</td>
</tr>
<tr>
<td>IVACG</td>
<td>International Vitamin A Consultative Group</td>
</tr>
<tr>
<td>JICA</td>
<td>Japanese International Cooperation Agency</td>
</tr>
<tr>
<td>MOE</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Government Organization</td>
</tr>
<tr>
<td>NMCHC</td>
<td>National Maternal &amp; Child Health Centre</td>
</tr>
<tr>
<td>PEM</td>
<td>Protein-Energy Malnutrition</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children's Fund</td>
</tr>
<tr>
<td>VAD</td>
<td>Vitamin A Deficiency</td>
</tr>
<tr>
<td>WFP</td>
<td>World Food Programme</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
APPENDIX 4: MCH MANAGEMENT & ADMINISTRATIVE STRUCTURE

TECHNICAL WORKING GROUPS (1 - 5)
Health Information\MCH Training\Maternal Health\Nutrition\CDD\ARI
APPENDIX 5: VIDTAMIN A TREATMENT PROTOCOL

VITAMIN A PROTOCOL

"1-2-3TREATMENT"

1 capsule: On diagnosis:
- Acute lower respiratory infection
- Chronic diarrhea
- Severe malnutrition

2 capsules: Measles
- One dose on diagnosis
- Second dose next day

3 capsules: Xerophthalmia
- One dose on diagnosis
- Second dose next day
- Third dose two weeks later

Dosage Units:
- Infants over one year: 200,000 IU
- Infants under 12 months: 100,000 IU

Note #1: Xerophthalmia can affect any age group and should be treated. The preschool-aged child population (i.e., 6 months through 71 months) is considered the most vulnerable for the associated blindness and mortality related to vitamin A deficiency. Thus, children under-six are considered the target population.

Note #2: Women of reproductive age are not indicated for the high dose vitamin A capsule, in case she should be pregnant. For night blindness or Bitot's spots, she should be treated with a daily dose (i.e., 10,000 IU) for two weeks. In case of active corneal lesions, it would, however, be reasonable to consider administering the full treatment for corneal xerophthalmia to prevent blindness.

Note #3: The above dosing should not be given to children who have already received a high-dose vitamin A supplement within the preceding month.
**APPENDIX 5: VITAMIN A UNIVERSAL DISTRIBUTION, PROTOCOL**

Vitamin A supplements

<table>
<thead>
<tr>
<th>Description</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children over 1 year and unders 6 years old</td>
<td>200,000 IU of vitamin A orally every 3 - 6 months</td>
</tr>
<tr>
<td>Infants 6-12 months old and, any older children who weigh less than 8 kg.</td>
<td>100,000 IU of vitamin A orally every 3 - 6 months. Immunization against measles provides a good opportunity to give one of these doses (see Note)</td>
</tr>
<tr>
<td>Lactating mothers</td>
<td>200,000 IU of vitamin A orally at delivery or during the next 2 months. This will raise the concentration of vitamin A in the breast milk and therefore help to protect the breast-fed infant</td>
</tr>
</tbody>
</table>

*Note:* When infant less than 6 months old are not being breast-fed, supplementation with 50,000 IU of Vitamin A before they reach 6 months should be considered.
CAMBODIAN VITAMIN A/MICRONUTRIENT TRAINING PLANS 1994-1995

1994

1. Introductory Community Based Regional Training (3-4 days)
   Conducted by NMCHC with Assistance from HKI, AIDAB, JICA and UNICEF

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rattanakiri</td>
<td>5/94</td>
</tr>
<tr>
<td>Kandal</td>
<td>8/94</td>
</tr>
<tr>
<td>Prey Veng</td>
<td>10/94</td>
</tr>
<tr>
<td>Battambang</td>
<td>11/94</td>
</tr>
<tr>
<td>Kratie</td>
<td>12/94</td>
</tr>
<tr>
<td>Kandal</td>
<td>8/94</td>
</tr>
<tr>
<td>Kp. Spue</td>
<td>9/94</td>
</tr>
<tr>
<td>Sre Ambel,K.Kong</td>
<td>9/94</td>
</tr>
<tr>
<td>Svay Rieng</td>
<td>10/94</td>
</tr>
<tr>
<td>Siem Reap</td>
<td>12/94</td>
</tr>
<tr>
<td>Kampot</td>
<td>12/94</td>
</tr>
<tr>
<td>Stung Treng</td>
<td>8/94</td>
</tr>
</tbody>
</table>

2. Training by NGOs in Districts

   WVI (Outdoing, Battambang, Kandal)  
   YWAM (Stung Treng)
   World Concern (Prey Veng)  
   SCF-Australia (Kompong Cham)
   EDC(Takeo,Phnom Penh)  
   Health Unlimited(Rattanakiri)
   ARC(Pursat)  
   COR-Canada(Pursat)
   CARE(Pursa)  
   IRC(Kompong Chhnang)
   CRS (Battambang)  
   COR (Prey Veng)
   Infant Espoir (Kandal)  
   CWS(Kompong Thom)
   MODE (Kompong Thom)  
   Samaki (Svay Rieng)
   JOCS (Takeo)  
   VSA(Takeo)
   MKI (technical asst. and materials to NGOs)

3. Nutrition Gardening Training for local NGOs and farmers at Kbal Koh Vegetable Research Station assisted by HKI, CWS, and UNICEF FFP.

1995

1. Four Nutrition Training of Trainers one per quarter 15-20 trainers.

2. 21 provincial nutrition Trainings conducted by trainers who were trained by central level

3. 33 supervision trips from the National MCH Center. This will consist of 2 trips per year for the 12 big provinces, and one trip per year to the remote smaller population areas.

4. Nutrition Gardening Training for local NGOS and farmers continued through Kbal Koh Vegetable Research Station and other centers.

5. Nutrition Gardening Training done in rural areas by those trained by Kbal Koh or other centers.

6. Social Marketing Training for Health Education unit (HKI/PSI)
1. Training of MCH and National Blindess Prevention surveyors for national vitamin A survey.
2. Design and Conduct National Vitamin X survey Feb-May 1996
3. 24 supervision trips
APPENDIX 6:
VITAMIN A/MICRONUTRIENT TRAINING PLANS 1994-1995

IEC MATERIALS

1994

1. Fruit and Vegetable Calendar (CNHE/HKI)
2. Vitamin A Child Survival Card (NMCHC/HKI/UNICEF)
3. Night Blindness Cartoon Story Book (CNHE/HKI)
4. Vitamin A radio songs (CNHE/HKI)
5. Vitamin A Medicinal Plant List (HKI)
6. Plants for Khmer Nutritional Gardens (HKI)
8. Night Blindness Animal Story (WVI)
9. Vitamin A Cartoon Treatment Guideline Posters (WHO/HKI)
10. Nutritional Gardening Curriculum (Dept of Agronomy/CWS/HKI)
11. Mixed Gardening for Nutrition, Khmer translation (HKI)
12. Report of the Cambodian National Vitamin A Workshop

1995

1. Weaning food Vitamin A Calendar
2. Nutrition flip chart
3. Iodine deficiency disorder flip chart
4. Social marketing messages for vitamin A, iodine, iron
5. New find, treat, prevent vitamin A deficiency cards
6. Multi-purpose plant cartoon book
7. Khmer version of HKI Vitamin A Education Handbook

1996

1. Micronutrient/Breastfeeding Calendar
2. Social Marketing messages for micronutrients
3. Food processing/preservation cartoon book
4. New training materials based on survey results
APPENDIX 7: WITAMIN A PROCUREMENT AND DISTRIBUTION

1. UNICEF will procure Vitamin A capsules for the Ministry of Health and will be distributed via the Central Medical Stores (CMS). Procurement will be done via UNICEF supply systems.

The initial order of Vitamin A (1993) took six (6) months to be cleared from the port authorities and delivered to the CMS. Subsequent Vitamin A order via UNICEF will have a lead time of at least six (6) months.

2. For the initial implementation of the Vitamin A Program the CMS will include Vitamin A capsules in the Essential Drug (ED) kits for district and commune health facilities. These capsules will be used in the treatment of conditions outlined in the policy document.

A schedule of the 1994 CMS Essential Drug distribution schedule is appended as a guide for future distributions which will already include Vitamin A capsules. Appendix 7a.

3. Distribution for prevention purposes will be done selectively during the initial phase of the program. Appendix 7b shows the prevention distribution needs, by province, as projected for 1994.

4. STANDARDIZATION:

Aid organizations intending to donate/import vitamin A capsules to the Ministry of Health should follow the recommended standard of 200,000 IU per capsule (vitamin A in oily solution).
ACTIVITY PLAN 1994 - CENTRAL MEDICATISTORES

ACTIVITY          JAN   FEB   MAR   APR   MAY   JUN   JUL   AUG   SEP   OCT   NOV   DEC   JAN

PLANNING          
BUDGET $          
DOCUMENTATION / PACKING

DISTRIBUTION
14 Provinces by toad
Essential drugs
TB.malaria
Vaccines (Part 1)
EPI material

DISTRIBUTION
B Remote Provinces by air
Essential drugs
TB Malaria
Vaccines. EPI Material
Kerosene

DISTRIBUTION
14 Provinces
Kerosene
Vaccines (part)
EPI Material

Note: Lilt approved plan (EPI, I.A. Moltda. Essgrt Hal thugs alt other )health Item

to be given to CMS not later than 7th February, 6th May, 5th August, 4th November 1994 and 4th February
Note: August anti Novette4el distributions of Keroseno and Vaccine (ball) nifty be Integrated whir rite
main drug dellvorlles if strong capacity at provincial level Is adequate to accept all vaccine at one time.
## Proposed 1994 Prevention Vitamin A Capsule Distribution

<table>
<thead>
<tr>
<th>Location</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kampong Cham (Cheung Prey, Prey Chhor)</td>
<td>15,000</td>
</tr>
<tr>
<td>Kampong Thom (Baray, Prasachbalang, Sandan)</td>
<td>15,000</td>
</tr>
<tr>
<td>Koh Kong (Srei Ambel, Tmar Banq)</td>
<td>5,000</td>
</tr>
<tr>
<td>Takeo (Bati, Kot Andet, Somroang)</td>
<td>15,000</td>
</tr>
<tr>
<td>Kandal (KadaL Stung)</td>
<td>20,000</td>
</tr>
<tr>
<td>Prey Veng (Preah Sdach, Komchaymea)</td>
<td>10,000</td>
</tr>
<tr>
<td>Pursat (Kondieng Bakkan, Krakor)</td>
<td>10,000</td>
</tr>
<tr>
<td>Kompong Speu (Somroang Tong Oral, Oudong)</td>
<td>15,000</td>
</tr>
<tr>
<td>Svay Rieng (Svay Tun, Romeas Hek)</td>
<td>15,000</td>
</tr>
<tr>
<td>Ratanakiri (All Districts)</td>
<td>5,000</td>
</tr>
<tr>
<td>YEAR 1 1995</td>
<td>YEAR 2 1996</td>
</tr>
<tr>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>YEAR 2 1995</td>
<td>YEAR 2 1997</td>
</tr>
<tr>
<td>10,000 [HKI] (JICA)</td>
<td>3,000 [HKI] (JICA)</td>
</tr>
<tr>
<td>(AIDAB)</td>
<td>3,500 (AIDAB)</td>
</tr>
<tr>
<td>(GOVT)</td>
<td>1,000 (GOVT)</td>
</tr>
<tr>
<td>Subtotal: 3,500</td>
<td>Subtotal: 3,500</td>
</tr>
<tr>
<td>20,000 [UNICEF] (HKI)</td>
<td>4,000 [UNICEF] (HKI)</td>
</tr>
<tr>
<td>(GOVT)</td>
<td>1,000 (GOVT)</td>
</tr>
<tr>
<td>Subtotal: 4,000</td>
<td>Subtotal: 4,000</td>
</tr>
<tr>
<td>3,500 (HKI) (AIDAB)</td>
<td>3,500 (HKI) (AIDAB)</td>
</tr>
<tr>
<td>(GOVT)</td>
<td>1,000 (GOVT)</td>
</tr>
<tr>
<td>Subtotal: 3,500</td>
<td>Subtotal: 3,500</td>
</tr>
<tr>
<td>1,000 (GOVT)</td>
<td>1,000 [UNICEF] (GOVT)</td>
</tr>
<tr>
<td>Subtotal: 1,000</td>
<td>Subtotal: 1,000</td>
</tr>
<tr>
<td>57,000</td>
<td>57,000</td>
</tr>
</tbody>
</table>

The above amounts have not been included in the grand total.

APPENDIX 9: LIST OF WORKING DOCUMENTS

1. “Avitaminose A et troubles dus aux carences en iode.”
   Letter addressed to Dr. Mam Hun Heng (Undersecretary of
   State-Health) by Dr. S.T. Han (Regional Director), World

2. Consultant’s Travel, Report, Dr. Nicholas Cohen-World Health

3. Final Results: 1993 Vitamin A Survey, National MCHC

4. Report of the Cambodian National Vitamin A Workshop-
   December 2-4, 1993. Ministry of Health/National Maternal and

5. Vitamin A Supplements: guide to their use in the treatment
   and Prevention of vitamin A deficiency and xerophthalmia.

6. Working Documents (Training, Distribution, Projections)
   prepared and gathered by the Vitamin A Working Group.
APPENDIX 10: MICRONUTRIENT WORKING GROUP

1. **Dr. End Huot**
   Director, National MCH Centre
   Ministry of Health
   Phnom Penh

2. **Dr. Sour Kim An**
   National Programme Manager
   Nutrition/Micronutrients
   National MCH Centre
   Phnom Penh

3. **Dr. Or Sivarin**
   National Programme Manager
   MCH Training
   National MCH Centre
   Phnom Penh

4. **Dr. Tung Rathavy**
   Pediatrician
   Coordinator-Baby Friendly Hospital Initiative (BFHI)
   National MCH Centre
   Phnom Penh

5. **Mr. Touch Dara**
   Technical Assistant
   National MCH Centre
   Phnom Penh

6. **Mr. Keith Feldon**
   Project Director
   Helen Keller International
   Phnom Penh

7. **Mr. John Grundy**
   MCH Adviser
   Australian International Development Assistance Bureau (AIDAB)
   Phnom Penh

8. **Dr. Douglas Mendoza**
   Project Officer/Adviser-MCH/CDD/ARI
   UNICEF-Cambodia
   Phno