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PROJECT CONCERN INTERNATIONAL *con 82819*

**Child Survival VII:
Improving Immunization Coverage and Village Health
Post (Posyandu) Implementation
Maluku Province, Indonesia**

September 1, 1991 - August 31, 1994

**FIRST ANNUAL REPORT
SUBMITTED TO
THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
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OFFICE OF PRIVATE AND VOLUNTARY COOPERATION**

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**Project Concern International
3550 Afton Road, San Diego, California 92123
Telephone: 619/279-9690; Fax: 619/694-0294**

1. RESULTS IN YEAR ONE

1.1 Major Results

a. Open two sub-offices.

MOH/Maluku has provided office space for PCI project managers in Ternate (N. Maluku) and Tual (SE Maluku) in their respective District MOH offices, working side-by-side with the local CDC staff. The project managers spent about 60% of their time the past year in Ambon learning their jobs. In the coming year they will remain on-site 80% of the time working with the local officials. The central office in Ambon maintains contact by telephone and hopes, in the future, to also be able to communicate by SSB.

b. Baseline Survey Area I.

This survey was completed in November, 1991 and covered 32 of the 56 sub-districts in Maluku designated as the most populated and easiest to access. Area I contains 72% of the total population of Maluku. The results were included in the Detailed Implementation Plan.

c. Formation of the Provincial Posyandu Management Team (PMT)

The Governor of Maluku issued a Letter of Decision in December, 1991 decreeing the formation and composition of this team. The Team is composed of members from all the development sectors including health and local government. (See the Detailed Implementation Plan (DIP) for details.) The first formal meeting was held in January and served as an orientation for District health and development officials who were charged with forming District-level teams. A core working committee of the Provincial PMT works closely with PCI to coordinate activities. This Provincial PMT was recognized by the National Posyandu Working Group and UNICEF in Jakarta (explained further below).

d. Formation and training of five District Posyandu Management Teams (PMTs).

The five District PMTs, formed at Provincial instruction, came to Ambon in April and were trained by the Provincial PMT and PCI staff in Posyandu in immunization program monitoring. A Posyandu Monitoring scheme devised by PCI/Maluku, based on the Local Area Monitoring (LAM) program for immunizations, was introduced and taught to the team members. The scheme is very simple and uses a scoring system for sub-districts and villages to help identify which areas have the greatest need (difficulty) in implementing the Posyandu and the immunization program. Four indicators are used reflecting the number of doses of vaccine administered and child attendance at Posyandu. These District PMTs were charged with forming and training the Sub-district PMTs.

e. Training of 56 Sub-district Governors in Posyandu Management.

The Provincial Posyandu Management Team requested that PCI train PMTs for all 56 sub-districts this year instead of waiting to train the 24 Phase II teams in 1993. PCI agreed, but with the provision that due to budgetary allocations the training of the Village teams would then be postponed until 1993. Before the Sub-district PMTs were formed, the Sub-district governors (camat) were oriented and trained in the use of the Posyandu Monitoring scheme. UNICEF contributed by funding the intensive training of the 27 camat in N. Maluku and Central Halmahera Districts in the Immunization Local Area Monitoring program. This 3-day session trained camat in analyzing seven immunization indicators including drawing all the graphs. PCI does not agree that such intensive training is either necessary or cost-effective since it is highly technical and too complicated and time-consuming for use by busy local governors. The PCI approach assumes the camat in his Monthly Coordination Meetings only has time for a quick assessment of the Posyandu situation and, if burdened with complicated tables and charts, will not bother to use the LAM system at all. UNICEF and PCI/Maluku have agreed to compare the performance results of the intensive training program with PCI's simplified four-indicator approach over the course of the project.

f. Formation and training of 53 Sub-district PMTs.

During the months of May to August fifty-three Sub-district PMTs were formed and trained by their respective District PMTs and PCI staff. Only three teams remain to be trained (from the three Sub-districts in the city of Ambon -- scheduled for mid-October). Each Sub-district team, including their respective camat, learned the Posyandu Monitoring scheme and returned home with the manuals and forms to start the process.

g. Establish Posyandu implementation monitoring scheme.

With the formation and training of all 56 Sub-district PMTs, the Posyandu Monitoring scheme can begin in October. PCI's work now is to supervise and encourage the timely implementation of monitoring and reporting, plus help to work out any obstacles in the reporting system.

h. Cold-chain survey.

This survey, conducted over three months from February to April, consisted of visiting all 101 health centers in Maluku and conducting immunization activities at that time to assess their ability to maintain the cold-chain and manage the immunization program. An inventory was taken of staff, transport equipment, vaccine stores, refrigerators/freezers, plus vaccine transport and immunization equipment. Through interviews information was obtained from immunizers concerning their training, knowledge and practice of immunization policies. A Cold-chain and

Immunization Services Status Report has been completed and approved for distribution in September.

i. Establish computerized cold-chain data base at provincial MOH.

A computer system was purchased by PCI and installed for the Provincial CDC in Health Services. The survey information was entered into a database using Professional File System (PFS) at the Provincial MOH CDC office for their use in developing strategies for improving the cold-chain and immunization outreach. The database will be updated every six months during supervisory visits by the District-level CDC officials working with the PCI Project Managers. A report has been generated for each health center and feed-back shared. Results of the survey were presented to the Provincial MOH staff in August.

j. Train three Provincial MOH and one District MOH staff in computer use and data management.

PCI staff have been training the responsible Provincial CDC staff in general computer skills and usage of the database. In addition, the MOH/N. Maluku sent a CDC official to Ambon at their own expense for four weeks of computer training in August at the PCI/Maluku office. PCI staff then helped install and setup a new computer purchased by the GOI in Ternate (the District capital). Prior to this the computer had been sitting in a carton in the MOH office because no one knew how to install or use it.

k. Baseline Survey Area II.

Since the phased implementation of the Posyandu Management Team component was modified to include all the Sub-district PMTs in both Areas I and II, PCI/Maluku was compelled to undertake the Baseline survey for Area II immediately. Thus, the 24 Sub-districts originally designated as Area II (difficult-access areas) were surveyed in September using the same 30-cluster sampling technique and questionnaire used for the Area I Baseline survey. As this survey required going to more isolated areas, it took three weeks longer to perform and cost almost twice as much. The team surveying part of SE Maluku needed five weeks in the field to survey only four clusters! The data is just being entered into Epi5 and will be available for analysis by October 7th. Preliminary results indicate that, as expected, the immunization coverage is only about 20% for Area II (compared to 47% for Area I). The Area II Baseline Survey Report will be completed in November.

l. Workshop on Adult Education Techniques.

As part of the preparation of PCI/Maluku staff for carrying out the planned training activities in the next several years, PCI conducted a seven-day workshop on Adult Education Techniques using senior staff and a PCI training specialist from PCI/Riau.

An invitation was extended and accepted by three MOH and two Women's Welfare (PKK) staff to attend.

m. Finalize TBA training curriculum.

The TBA training scheme has been delayed two months due to the necessity to carry out the Baseline Survey for Area II in September (the end of the east monsoons) when weather permits travel at sea. A MOH TBA Training Committee has been formed including Provincial MOH midwives and the MCH Heads for Health Services and Area Health. In the process of planning the training component, agreement has been reached concerning the TBA kit components, training materials, curriculum and schedules.

1.2 Changes in Approach to Individuals at Higher Risk

No changes were made in this area since the submission of the DIP.

1.3 Staffing

(1) Stephen Robinson, MD, MPH (Project Director): Responsible for all aspects of the project administration and implementation. Dr. Robinson designed this project and has been in Maluku since July, 1991.

(2) Martin Fitzpatrick, MPH (Sr. Project Manager): Responsible for activities of all project managers in three offices - Ambon, Ternate, and Tual, plus the Social Marketing/Training specialist. Serves as assistant to Project Director. Mr. Fitzpatrick is a VSO seconded to this project since the completion of his language training in October, 1991.

(3) Rury Moenandar (Project Manager/Ambon): Responsible for implementation of project activities in Ambon City and Central Maluku District. Based in Ambon at the central PCI/Maluku office. Mr. Moenandar came to PCI with four years experience as director of a local NGO in September, 1991.

(4) Djafar Albaar (Project Manager/Ternate): Responsible for implementation of project activities in the Districts of North Maluku and Central Halmahera. Based in Ternate at the MOH/ N. Maluku office. Mr. Albaar holds a Law degree and was born in N. Maluku. He joined PCI in October, 1991.

(5) Marthen Salosso (Project Manager/Tual): Responsible for implementation of project activities in SE Maluku District. Based in Tual in the MOH/SE Maluku office. Mr. Salosso has a degree in Economics and joined PCI in December, 1991 after participating as a student interviewer in the first Baseline survey.

(6) Juliana Sopacua (Social Marketing/TBA Training Specialist): Responsible for coordinating the TBA training program and the Social Marketing component of the project which includes the School Posyandu Program. Ms. Sopacua recently joined PCI from working as a trainer with the MOH in August, 1992. She is based in Ambon.

(7) Farry Muntu (Office Manager): Responsible for project procurement, administration, personnel and logistics. An eight year employee of PCI/Indonesia, Mr. Muntu has worked with PCI's Child Survival projects since 1984.

1.4 Continuing Education

(1) Project Director:

- a. NCIH Annual meeting in Washington, D.C. (June, 1992) - participant
- b. 2nd Annual Maluku Research Conference, Univ. of Hawaii (August, 1992) - Presented paper on TBAs and health practices in Maluku.
- c. Bloodborne Pathogens Workshop, Univ. of Hawaii School of Medicine (August, 1992) - participant

(2) Sr. Project Mgr. and three Project Managers:

- a. Training on Cluster Sampling Survey technique (1 week - October, 1991) by Project Director
- b. Workshop on Adult Education Techniques (1 week - February, 1992) by PCI/Riau staff
- c. Training on Immunization Monitoring and Immunization Equipment (1 week - March, 1992) by MOH/Maluku
- d. Refresher training on Cluster Sample Surveys (August, 1992) by Project Director
- e. Ongoing training on computer skills using Lotus, WordPerfect, EP15, and Professional File.
- f. Ongoing training on report writing, finance, and project management

(3) Social Marketing/TBA Training specialist:

- a. Training on Cluster Sampling Survey technique (August, 1991) by Project Director

1.5 Technical Support

(1) Julie McLaughlin, Programming Officer from PCI HQ visited Maluku in October, 1991 for one week to assist with preparation of Baseline Survey Questionnaire for Area I based on Johns Hopkins protocol using EPI5. She had the opportunity to go to the field and see some of the problems the project would be tackling in the year to come. Since this visit, Ms. McLaughlin has been to Indonesia two more times in the capacity of providing technical assistance to other PCI projects and reviewing the Maluku program.

(2) Dr. Pirkko Heinonen, EPI Project Officer, UNICEF/Jakarta visited the project site in April, 1992 and provided some technical advice on cold-chain management.

(3) PCI/Maluku has been offered the internship services of a Henry Luce Fellow for ten months (October, 1992- June, 1993). Heather Lynch, a pre-med student recently graduated from the University of N. Carolina, was placed with PCI/Maluku at the request of The Asia Foundation. She will work with the senior staff in designing small studies and evaluations needed to strengthen the TBA training program. The first priority will be the pre- and post-testing of the TBA curriculum. Later work will be with the School Posyandu program described in the DIP. Other technical support for this project comes from the Project Director who is also the Asia Regional Technical Advisor for Project Concern International.

1.6 Community Participation

This project does not form nor train community health committees in the classic sense. It did, however, form and train Posyandu Management Teams at the Provincial (1), District (5), and Sub-district (53) levels during the past 9 months. The District Teams (or PMTs) already trained are each composed of five members representing:

- (a) Head of local government (Bupati)
- (b) Village Development Board (BangDes)
- (c) Women's Social Welfare Association (PKK)
- (d) Regional Development Planning Board (Bappeda)
- (e) Ministry of Health (local Health Center doctor)

The Sub-district PMTs already trained are each composed of four members representing:

- (a) Head of local government (Camat)

- (b) Village Development Board (BangDes)
- (c) Women's Social Welfare Association (PKK)
- (d) Ministry of Health (local Health Center doctor)

These teams as described in the Detailed Implementation Plan (DIP) are charged with increasing Posyandu implementation through ensuring local government and intersectoral support. The effect is to improve health through improved implementation of health activities such as immunizations, growth monitoring, health education and family planning, all of which occur at the Posyandu. Now that the upper-level teams are in place, during Year Two about 1,875 Village-level Posyandu Teams will be formed and trained by the Sub-district PMTs. These village teams will work locally to ensure community participation.

The Provincial PMT has met several times this year. The last meeting was in September, 1992. District PMTs are scheduled to meet quarterly and the Sub-district PMTs monthly in coincidence with the Camat Monthly Coordination Meeting. As these Sub-district PMTs only completed their training in the past two months there has been little opportunity to formally meet.

1.7 Linkages to Other Health and Development Activities

PCI/Maluku works very closely with the MOH/Maluku to coordinate activities. The GOI Immunization Program budget for 1992-93 was planned with the PCI contribution integrated into the funding plan:

Local Government	\$ 94,900	27.4 %
Central Government	54,790	15.8
UNICEF	63,470	18.3
Outside sources	40,520	11.7
PCI/Indonesia	\$ 92,770	26.8 %

The Baseline Survey Area I confirmed that the immunization coverage for 32 sub-districts (Area I) in Maluku was, indeed, low. The Communicable Disease Control Division of MOH/Jakarta has since received UNICEF funding to conduct a province-wide Immunization Coverage survey to obtain population-based immunization data from the field. In the past the National Immunization Coverage data has come from monthly provincial reports of doses of vaccine administered. This data is now suspect. When PCI/Maluku was planning the Baseline Survey Area II, UNICEF felt our results would be accurate enough to obviate performing their own

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centrally- sponsored survey. However, since our questionnaire is different from the MOH/Jakarta, they were forced to proceed with the Central MOH survey as planned. This survey is now being conducted (September, 1992). However, we do not expect the results to be representative of the entire provincial population, since they have limited their cluster selection to towns and villages that can easily be reached by the sub-district health centers (Wilayah I villages: Villages that can be reached monthly for immunization visits). This excludes about 22% of the population which lives in Wilayah II and Wilayah III villages (can only be reached quarterly or yearly). Our two Baseline Surveys (Areas I and II) covers the entire population of Maluku.

The concept of using Posyandu Management Teams (Tim Pokjnal Posyandu) for improving Posyandu implementation was a strategy first used by PCI/Indonesia in SE Sulawesi with CSIV (1988) and later in Riau (1989). In 1990 the GOI coincidentally and independently decreed the formation of a National Posyandu Working Group which, with the support of UNICEF, has formed and trained Provincial and District PMTs in ten provinces. All provinces were mandated to form Intersectoral Posyandu Management Teams but funding was only forthcoming for the above eight provinces. In late 1991 PCI/Indonesia was invited to report to the National Posyandu Working Group and UNICEF on our achievements in forming and training Provincial and local PMTs in SE Sulawesi, Riau and plans for Maluku provinces. On-going coordination with these bodies has included sharing the cost with UNICEF for training of the camat and 27 PMTs in North Maluku and Central Halmahera Sub-districts in May, 1992. Both the National Working Group and UNICEF are very pleased that PCI/Indonesia is assisting in the expansion of this program since their funds are limited to only ten provinces, none of which are in the PCI project provinces.

In addition, UNICEF, who helped create the Local Area Monitoring (LAM) scheme, is strongly supporting the expansion and utilization of this concept for achieving UCI (Universal Child Immunization) in Maluku (which still has the lowest immunization coverage rate of all 27 provinces. PCI/Maluku's program of training the PMTs to use the LAM concept to monitor Posyandu implementation and immunization activities conforms well with the GOI and UNICEF priorities. UNICEF funded the training of 28 camat in the use of LAM (in which PCI staff participated), and PCI has subsequently funded the training of the 28 remaining camat plus their respective PMTs.

PCI/Maluku sponsored a meeting of local NGOs in May to learn about health development activities they are conducting and to see how PCI can coordinate work with them. From this meeting PCI staff was invited to participate in the training of TBAs sponsored by the Gereja Protestan Maluku in two sub-districts: NE Buru and Kei Kecil. The local NGO decided to use the PCI-designed TBA bags for completing their TBA kits. These were purchased through PCI and later distributed. Coordination with this local NGO in TBA training will allow PCI to avoid duplication and expand to areas not originally covered in the original project design.

2. CONSTRAINTS, UNEXPECTED BENEFITS AND LESSONS LEARNED

2.1 Constraints

There have been some minor delays in project implementation during the past year due to several factors:

(1) Scheduled trainings in May and June were postponed due to the ban on field travel and meetings prior to the National election in June.

(2) The tragic death of Dr. A. Lokollo, Head of Health Services, MOH/Maluku (our direct counter-part agency) in July, 1992 due to a plane crash in Ambon resulted in the postponement of some activities until an Acting Head could be appointed. This primarily affected the review and publishing of the Cold-Chain Survey results which were delayed until September.

(3) The east monsoons dragged on into late August and delayed our starting the baseline survey for Area II until September. Since Area II is much more remote than Area I, most travel is by long-distance boats that must be chartered and thus are usually small. Travel expenditures for this survey were twice that of the Area I survey. Weather will continue to play a significant role in determining our calendar for implementing activities. The west monsoons starting in January will undoubtedly affect subsequent activities for the three month duration perhaps delaying the mid-term survey until April.

(4) Difficulty was experienced in finding a qualified candidate for the Social Marketing position. We wanted a woman who had experience working with teachers and had some health training experience in the village. Almost all experienced teachers or health-experienced personnel are government workers who generally are hesitant to leave their government jobs to take a position with a private NGO for a project. It is difficult to arrange for a Leave of Absence of two to three years. After advertising for five months and interviewing many unqualified candidates (including qualified men), we hired a very good MOH trainer in the end of August.

(5) It has become obvious with our cold-chain survey that many of the immunization problems could be solved if there was more money budgeted for training of Posyandu cadres (similar to VHWs), transport of health center immunization staff to the more isolated areas, and more frequent supervisory visits from CDC staff to the field. PCI/Maluku has done much to delineate these budgeting needs and even calculate the amounts needed. This information can be used by the MOH during the budget preparation process in October. Unfortunately, PCI has little influence over the resultant decisions.

(6) PCI/Maluku has not yet been able to get government consent to set up a SSB radio in the Ambon office to facilitate communication with staff in Ternate and Tual.

There are no further constraints anticipated for 1992-93, except that the East and West monsoons will recur as usual.

2.2 Unexpected Benefits

(1) The coordination with the National Posyandu Working Group and UNICEF on PMT training was an unexpected benefit (see 1.7 above). Sharing the training with UNICEF has allowed us to save some funds to enhance other training activities, e.g., increasing the number of health center doctors who can attend the trainings.

(2) When PCI sponsored a local NGO forum in May, we did not anticipate accomplishing more than just an introduction to the local NGOs. However, one contact (Gereja Protestan Maluku) has led to a working relationship wherein PCI collaborated in TBA training.

(3) The postponing of the training of the Village Posyandu Working Groups until early 1993 has actually been beneficial, since the project will now have more time to sort out the "bugs" in the Posyandu Monitoring scheme.

2.3 Institutionalization of Lessons Learned

(1) Results from the Cold-chain survey revealed that there was major confusion in the minds of the immunizers about the MOH immunization policies. MOH/Maluku is in the process of composing a Policy Letter to be sent to all health center staff to emphasize and help enforce adherence to the following MOH policies:

- (a) The only contraindication for immunization is if a child is so sick he/she needs immediate hospitalization;
- (b) Do not fail to immunize a child even if he/she has already passed his/her first birthday;
- (c) Do not fail to immunize a child who has fever;
- (d) Do not fail to immunize a child who has diarrhea;
- (e) Do not fail to immunize a child who has a cold;

(2) The Cold-chain survey also revealed that only 43% of the health centers routinely monitor the temperature of stored vaccines. Moreover, more than a third of the health centers were found to have vaccines stored at temperatures outside the recommended standards (2 to 8 °C.). This has prompted MOH/Maluku to plan to issue a strong Policy Letter warning health center personnel that they must adhere to the requirement on monitoring and recording refrigerator temperatures.

(3) Additional funds will be requested by MOH/Maluku at the Budget Planning meetings in October to ensure there are sufficient funds for District MOH CDC personnel to make semi-annual supervisory visits to each health center. PCI assisted in compiling the budgetary figures for this effort. The cold-chain survey made it possible for some District-level CDC personnel to visit remote health centers that, prior to the survey, they had never visited.

(4) From the cold-chain survey a database has been established that contains information on the 101 health centers providing immunizations. Included is an inventory of staff, transport (vehicles, boats, motorcycles), power sources, cold-chain equipment (refrigerators, vaccine carriers, cold packs), vaccine equipment (sterilizers, needles, etc.), and vaccine stocks (both good and spoiled). Also included is information about the training and knowledge of the vaccinator, records kept and travel plans to cover all the villages in their respective areas. This database has been entered into PFS by PCI staff and transferred to MOH computers for their daily use. The CDC staff has been trained in the use of the program so they may call up the database information at any time. The MOH/N. Maluku District at their own expense sent a CDC staff member to Ambon for three weeks for computer training in the PCI office (staying in the PCI office guest facility). The MOH/Maluku is very glad to have this data as it was not available before. The plan is to update it each six months and send each health center a report. The computerization of this information provides a powerful tool for supervision and planning.

3. CHANGES MADE IN PROJECT DESIGN

3.1 Changes in Perceived Health Needs

At the request of Helen Keller International/Indonesia we added a question on the Area II Baseline survey looking for evidence of Vitamin A capsule administration on the RTH card. In the more remote area, the proportion of children who had RTH cards was, of course, low. But from those available, it was evident that very little is happening in the Vitamin A distribution program (only 5.6% of children under 2 in Area II received one dose of Vitamin A in the past year). As result, in collaboration with HKI we will be designing a trial study for Vitamin A distribution via the TBAs that will be trained. The details of this will be worked out in November when a Vita consultant will come to Ambon for the design process.

Based on information obtained from both baseline surveys it was decided to augment the TBA training content. In addition, to the usual information in the TBA curriculum about recognizing and referring high-risk pregnant women, using clean and sterile delivery techniques, PCI and the MOH/Maluku have agreed to include the following information for TBAs to transmit to mothers:

- 1) Need for two tetanus toxoid immunizations during pregnancy. (Maternal Health Cards are not available in Maluku. PCI/Maluku does not have a budget to provide these cards, especially when it is the initial responsibility of the GOI).
- 2) Since few mothers knew the purpose of TT, TBAS will be taught to inform mothers that it protects both mother and child against tetanus.
- 3) Pregnant women need to increase the quantity of food and should include iron-rich foods.
- 4) Pregnant women need to rest more than before they were pregnant.
- 5) Pregnant women should visit a health facility at least two times during their pregnancy for an exam by a health professional. The first visit should be in the first trimester, if possible (this will facilitate TT immunization, also).
- 6) After delivery a mother needs to have several post-natal visits, one preferably at a health facility.
- 7) The baby needs to be taken to and registered at the first Posyandu after birth. (The MOH has agreed to allow TBAs to distribute RTH cards at the time of delivery to ensure better referral to the Posyandu).
- 8) Each child needs five injections of vaccine (plus oral drops x 3) before one year of age in order to be fully immunized.
- 9) Besides ORT as the first treatment for diarrhea, breast-feeding should be continued in increased quantities. In addition, the child with diarrhea should be offered increased amounts of fluids and food. A child recovering from diarrhea should be given one extra meal a day.
- 10) Anti-diarrheal medications and antibiotics should not be given to young children with diarrhea, except with medical advice.
- 11) Review of basic signs of dehydration and need for mother to seek trained medical help. Many of the above points were included in the DIP, but only recently did we obtain agreement with the MOH on the course content for TBAs.

3.2 Change in Project Objectives

Although there have been no changes in the measurable objectives delineated in the DIP, PCI/Maluku will strive to improve on some of the areas where from our more recent survey experience we see a profound lack of knowledge. For instance, the purpose of tetanus toxoid immunizations, the number of immunizations needed for completion of the series, the need for increased fluids/food during diarrhea and

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increased food intake during pregnancy. By agreement with the MOH these points will be incorporated into the TBA training curriculum.

Although the results of the Area II Baseline Survey are still incomplete, it is estimated preliminarily that the immunization coverage for Area II is very low -- perhaps, less than 20%. If this figure is combined with the result from the Area I survey and weighted by population, it becomes evident that the immunization coverage for all of Maluku is only about 40%. This lower number will make it somewhat more difficult to achieve the 65% target set in the DIP. The same is true of TT immunization coverage. Nonetheless, the objectives will remain unchanged.

3.3 Change in Planned Interventions

1) Some modifications have been made in regard to the scope of TBA training curriculum. These include the alterations seen in section 3.1., and, based on our experience of training techniques used by health center staff in the field, PCI/Maluku also decided to augment the TOT course for District and Health Center midwives to include 3 days training in Adult Education and Non- formal Training Techniques. This suggestion has been well-received by the MOH/Maluku.

2) TBAs will also be used for neonatal tetanus surveillance using the Pictorial Birth Recording Form. One picture will be added that asks the TBA to report on the health of the baby after one month of age. This will pick up neonatal deaths that can be investigated by the health center midwife who receives the report. The original plan was to conduct this surveillance as a pilot only, but the MOH has agreed to implement it throughout Maluku.

3) From our cold-chain survey it became evident that there was a great range in the knowledge and management skills of individual immunizers based in the health centers. Management is difficult to teach in a one-week workshop. It is more of a life-style than a technical skill. PCI/Maluku has decided to attempt embarking on a peer training program wherein immunizers that are recognized as running successful programs will be recruited to go to work side-by-side with an immunizer that seems to have more difficulty managing his/her program. This system should be mutually beneficial as the peer consult feels as if he/she is getting a "reward" by functioning as a consultant and getting to work in a new geographic area of the province for a month. Meanwhile, the immunizer who is receiving the peer consult will be receiving help in the field (and at the same time some on-the-job training and information) from a fellow worker who will pose little threat of "losing-face" before a superior.

4) See 3.1 above about Vitamin A trial.

3.4 Change in Potential and Priority Beneficiaries

None.

4. PROGRESS IN HEALTH INFORMATION DATA COLLECTION

4.1 Characteristics of the Health Information System

- 4.1.1 An informal health information system will be instituted through the trained TBAs who are supervised by the Health center midwives. TBAs will use a Pictorial Birth Recording form to register birth outcomes (baby died, mother died). In a pilot program to use TBAs for disease surveillance, a section will be appended to the form asking the TBA to record the health status of the infant four weeks after delivery to look for neonatal deaths that may be caused by neonatal tetanus. These forms will be delivered to the health center midwife when she attends the Posyandu each month. The midwife, will use these pictorial records to track maternal deaths, peri-natal and neonatal deaths at the Puskesmas. Midwives will also be able to follow-up suspected cases of neonatal tetanus and provide refresher training where delivery and cord cutting techniques are suspect. Most neonatal deaths currently go unreported as there is no formal mechanism unless the child is brought to the clinic. This is more the exception than the rule in Maluku where 71% of the villages are located more than 10 kilometers from a health center and 65% cannot be reached by wheeled vehicle.
- 4.1.2 The above system will be useful in directing services to high-risk women (those with peri-natal or neonatal deaths) and high-risk children (those unimmunized living in areas of high measles or polio endemicity).
- 4.1.3 The more formal and extensive HIS in this project entails monitoring Posyandu implementation and immunizations (thus visits made by health center staff to the villages to provide MCH services). PCI/Maluku together with the Provincial PMT designed a monitoring system based on LAM for immunizations that uses four indicators of Posyandu MCH service delivery:
- (a) % of target of DPT1 doses
 - (b) % of target of Polio3 doses
 - (c) % of target of Measles doses
 - (d) % of children under five weighed at the clinic

The first three, of course, emphasize the immunization aspect of this project, but the fourth measures community participation (how many children are being brought to the mobil clinics). Obviously, if the Posyandu does not happen, the indicators will be low for that village. Each village in a clinic catchment area gets a score based on the above four indicators. The Village Development official on the Sub-district PMT is responsible for obtaining this data from the health center staff each month, calculating the scores and reporting to the Sub-district Governor (camat) at the regular monthly Coordination Meeting the three or four villages with the lowest

scores. The camat, in turn, is charged with finding out from the HC staff and local village heads gathered at the meeting, why these villages have such low scores. He is then responsible for solving the problem recruiting assistance from other development sectors.

For example, one island village may have a low score because the Posyandu team from the HC was unable to visit the previous month. The camat finds out that the clinic's motorboat engine is broken and is currently being repaired. But until that time, this village cannot be easily visited. The camat has the authority to ask for assistance from another sector, like Agriculture or Family Planning, to loan their outboard engine to the HC staff on the day they are scheduled to go to that village. Involving the camat gets the local government involved in supporting the MOH immunization effort and promotes intersectoral cooperation. This concept worked very well for the Family Planning program ten years ago.

The Sub-district PMT fills out a simple form reporting the names of the lowest-scored villages and the results of efforts to solve their problems. These reports are to be sent to the District PMT for review. The District PMT, in turn, scores the Sub-districts using the same four indicators and uses these results to determine which areas need the most assistance. Supervisory visits from the District to the Sub-district ensue on a quarterly basis – especially to the Sub-districts with the lowest scores.

As the Sub-district PMTs have just completed their training, this system is only just beginning. A copy of the Manual (in Bahasa Indonesia) and the reporting forms used is in Appendix C.

- 4.1.4 The above monitoring systems reports on the implementation of Posyandu activities. It directly reflects the results of clinic activities, but since the Posyandu relies on the support of community health workers (Posyandu kader), it also reflects community support. However, there is no direct indicator for measuring individual kader participation in the present system.

4.2 Special Capabilities of the Health Information System

- 4.2.1 The project measures the number of Posyandus implemented, the proportion of children weighed per Posyandu and the percent of target doses of vaccine given. The targets are based on the population of children under 12 months of age. See 4.1.3 for details and an example.

- 4.2.2 The following sustainability indicators will be monitored:

- (1) Semi-annual reports generated by the MOH based on the cold-chain database
- (2) Quarterly reports generated by MOH/Maluku giving feed-back to districts on the immunization coverage and Posyandu implementation status based on the computerized HIS

- (3) Regular monthly Immunization Local Area Monitoring reports from 80% of the health centers.
- (4) Designation of an active representative from the National Posyandu Working Group (in Jakarta) responsible for Maluku
- (5) Regular monthly Posyandu indicator reports from 80% of the Sub-district PMTs
- (6) Regular quarterly Posyandu indicator reports from 100% of the District PMTs
- (7) Official allocation of funds each year in the Maluku Provincial and District budgets for PMT activities
- (8) Completion of training of 1,500 TBAs with demonstration in post-tests that knowledge was significantly enhanced

4.2.3 During the second year, the project will undertake a trial surveillance system for monitoring cases of neonatal tetanus, paralysis, and measles (See 4.1.1). PCI formed a local NGO in SE Sulawesi in 1990-91 which has had considerable success in training TBAs and drug cadres. In general, the drug cadre is trained to dispense simple medications like a VHW. As part of his/her duties a reporting form for the above diseases is maintained and passed on to the local HC on a regular basis during supervisory visits. Two anthropologists with extensive experience in Maluku have been contacted to serve as consultants in the design of the program in the upcoming year.

4.2.4 The project will only monitor the training of community health workers in the framework of the above-mentioned trials.

4.2.5 Almost all data from health centers are difficult to collect due to the expansiveness of Maluku (larger than the combined areas of California, Oregon and Washington). Mail service is usually inadequate for monthly reporting. Cold-chain data must be obtained from a supervisory visit, which entails considerable transport expense and time on the part of the District CDC (not to mention risk of life and limb on the unpredictable seas). We plan to use SSB for reporting the seven LAM indicators the the District CDC in the case of late mail.

Data for the Posyandu monitoring system comes directly from the HCs in each Sub-district to the Camat each month at the Monthly coordination Meeting. However, some sub-districts, like Aru in SE Maluku, have four HCs (three of which are as far away as seven hours by boat from the sub-district capital). Some sub-districts can not even schedule a Coordination Meeting monthly due to the transport logistics of village heads who are supposed to attend. In these difficult sub-districts, the monitoring system will be less effective and methods will need to be sought to solve the problems on an individual basis.

4.3 Management of the Health Information System

4.3.1 Setting up the Posyandu Health Information System required forming and training the provincial, district and sub- district PMTs. Since only a part of the function of the Posyandu Management Teams is monitoring Posyandu implementation and immunization activities, it is impossible to delineate precisely how much of the training is directly to support the HIS. Expenditures for training are listed below cover transportation, per diem, materials and administration:

1. Posyandu Management Team Development \$ 43,729

(a) Provincial PMT Orientation Meeting:

1 day attended by 25 participants

(b) District PMT Training (5 teams):

3 days attended by 25 participants

(c) Camat PMT/LAM Workshop (56 sub-districts):

1 day attended by 112 participants

(d) Sub-district PMT training (53 teams):

3-5 days for 212 participants

2. Cold-chain survey (transport & per diem) \$ 7,831

3. Computer supplies/training for MOH \$ 1,642

TOTAL \$53,202

PERCENTAGE OF FIELD EXPENSES TO DATE 30.2 %

4.3.2 Due to the recent completion of the baseline surveys, no formal review of indicators has yet occurred.

LAM reports from the health centers will reviewed routinely with the PMT Posyandu monitoring program starting in October.

4.3.3 We share the cold-chain data we receive on almost a daily basis with the MOH/Maluku including the District level offices. As the HIS system is still coming on board and people are learning how to use it, we have had an MOH official in our office almost every day during the month of September or one of our staff has been

at their office. During the Area 2 Baseline Survey we updated some of the cold-chain data and that is being shared with the MOH on a continuing basis. Duplicate files of each sub-district have been produced with a dossier on each health center including maps, a cold-chain data report and strategies for immunization coverage.

4.3.4 1) Posyandu Implementation Monitoring: Health center staff (usually the immunizers) collect the immunization data (doses of each vaccine given) from each village during the month. The number of children attending and weighed at the Posyandu is also collected. At the end of the month the LAM system is used to calculate the percent of target achieved for each of seven immunization indicators (DPT1, Polio3, Measles, DPT1- Polio3 Drop-out, TT1, TT2, and TT1-TT2 Drop-out). These are graphed and reported to the District CDC office. Data from DPT1, Polio3, and Measles targets, plus the % of children weighed (D/S) is shared with the Data Organizer from the Sub-district PMT so it can be prepared for presentation to the Camat at the next Monthly Coordination Meeting. This member of the PMT is supposed to be from the Village Development Board. The data is discussed and reviewed at the meeting and a decision made about corrective action needed for the villages with low scores (no or poor Posyandu implementation). A one-page report is generated (See forms in Appendix C) and sent on to the District level for quarterly review. The immunizers are supervised by the District CDC officials, and the Sub-district PMT will be supervised by the District PMT every three months.

2) The original cold-chain database was compiled by PCI staff and will be updated as information comes in but at least every six months. PCI will maintain copies of the database in tandem with the MOH during the project to closely coordinate its compilation, analysis and use as a management tool. Thus supervision will be almost daily or at least weekly.

4.3.5 PCI/Maluku staff have all been receiving on-going training in information management and computer skills. They have already performed two 30-cluster sample surveys, and participated in the entry of the data (double entry) and analysis and in the writing of reports. They have had to learn the LAM scheme in order to teach it to immunizers who are still learning it in the field.

One staff member who lives on the office premises as an office boy has become so skilled in the use of Lotus, WordPerfect, PFS and Epi5 that he is being used to teach MOH personnel on a one-to-one basis. He devised a curriculum/study plan himself and trained the CDC official sent from N. Maluku for three weeks in August.

5. SUSTAINABILITY

5.1 Recurrent Costs

5.1.1 As the major PCI contribution in this project is training and transfer of management and technical expertise, there are very few recurrent costs that would hinder sustainability. Those that would arise annually would include:

Annual Cost

(a) Posyandu Management Team system:

(1) PMT Meetings

Provincial (quarterly)	\$ 50
District (quarterly)	\$ 118
Sub-district (monthly)	\$ 0

(2) Supervision visits

Province ~ District (2x/year)	\$ 4000/yr
District ~ Sub-district (quarterly)	\$14400/yr

(3) Reporting forms \$ 35/yr

(b) Cold-chain/immunization Database:

Diskettes & computer paper	\$ 100/yr
Feedback reports (paper/postage)	\$ 150/yr

(c) TBA services

Birth/surveillance reporting forms \$ 400/yr

5.1.2 (a) Posyandu Management Team system: This system requires that regular meetings occur at all levels. Project funds assist with the cost for the first year after training and then phases out. After this the cost of quarterly Provincial and District meetings will be borne by the GOI as legislated by Inmendagri IX (Internal Affairs Decree IX - see DIP). The Sub-district meetings will always coincide with the Monthly Coordination meetings which are already institutionalized and budgeted by the GOI.

Supervisory visits from province to district and district to sub-district is borne by the project for the first year after training and then phased out with the GOI responsible thereafter. This understanding has already been established with the Provincial PMT, who will oversee the budgeting process through the Provincial BangDes office. This process has been realized in Riau and SE Sulawesi Provinces where PCI also formed PMTs.

The reporting system requires a simple form currently supplied by PCI, but later to be borne by the GOI as per agreement.

(b) Cold-chain/immunization database: The cold-chain database will be maintained by MOH/Maluku at no extraordinary cost, since the data will be collected by the District CDC officers during the course of routine supervisory visits each six months. The training PCI has provided will not incur recurrent costs. The LAM scheme has already been institutionalized and requires no continuation of project funds.

(c) TBA services: The community will continue to pay for the services of the TBAs as has always been the situation. TBA materials like alcohol, iodine, soap, and towels will be the responsibility of the TBA. The project is currently working out an agreement with MOH/Maluku that will help with restocking of alcohol by the health centers and free medical care to TBAs who report regularly. The replenishment of surveillance and birth reporting forms after the project will be borne by the GOI according to current agreement.

5.2 Strategies for Increasing Post-project Sustainability

5.2.1 1) The project has undertaken several strategies in an effort to increase sustainability. The project intends to improve outreach by assisting the MOH to strengthen the cold-chain. This will be done through better management capabilities, by developing computerized data bases of the status of cold-chain equipment status (refrigerators, sterilizers, vaccine stocks, transport), and improving human resources, and local area monitoring of immunization activities.

- The use of a Local Area Monitoring (LAM) System will be established in the project area as a tool for managing immunization activities and Posyandu function. This will stem from the increased involvement of local government in overseeing and solving problems of Posyandu implementation.

- A Cold-Chain database and HIS for use by the MOH/Maluku will be developed. To support this, a computer will be purchased for MOH/Maluku and provincial staff will be trained in the use of the cold-chain database and HIS as management tools.

2) The project intends to support the formation of Intersectoral Posyandu Management teams, assist in the training of these teams and support the development of their subsequent supervision. This has and will be done through the institutionalization of the Posyandu Management Team through the issuance of governmental letters of decision guaranteeing their sustained function and their support from the government budget.

3) The project intends to ensure TBA sustainability by utilizing a detailed selection process. The establishment of links with the formal health care system via HC

midwives in the role of supervisors will support the sustainability of the reporting system and continued function of TBAs in the community.

- 5.2.2 The cost of Sub-district PMT meetings has been eliminated since they will always coincide with an ongoing government Coordination Meeting. This meeting is held monthly by the Camat with his staff and the village heads to conduct routine business.

5.3 Cost Recovery

- 5.3.1 Sixty-five TBAs were trained by a local Christian Protestant NGO with PCI assistance. The local NGO purchased the TBA bags from PCI because we had already purchased 1,500 at a discount. Thus, we recovered $65 \times \text{Rp } 6,000 = \195 . This money will be put toward supplementing TBA kits with bulb syringes as a pilot study.

- 5.3.2 Drawing on experience from SE Sulawesi a pilot project will be undertaken in Year 2 on the feasibility of using Drug cadres for providing health services in villages very distant from a health center. Consultant anthropologists will be used to design the program which will have a cost recovery scheme, the details of which await the appropriate studies. Possibilities include fee-for-service, family health insurance, or village-wide insurance. The GOI is encouraging this program in remoter areas of the country.

- 5.3.3 No training in cost recovery has been undertaken to date.

6. **PROJECT EXPENDITURES AND JUSTIFICATION FOR BUDGET CHANGES**

6.1 Pipeline Analysis

Please refer to Pipeline Spreadsheet

6.2 Justification of Budget Changes

The only significant budget changes since the DIP were as follows:

- (1) The Area II Baseline survey cost approximately \$6,500, which is about \$2000 more than we had anticipated. Also when UNICEF decided not to assist in funding our survey, we lost an anticipated \$3,000 contribution.

7. **1992/1993 WORK SCHEDULE AND BUDGET**

7.1. Work Schedule

Quarter 1:

Finish/publish analysis of Baseline Survey Area II

Supervisory visit Provincial PMT ~ District PMTs

Supervisory visits District PMTs ~ Sub-district PMTs

Posyandu Monitoring by PMTs

District Midwife TOT Workshop (10 midwives)

Health Center Midwife TOT Training Area I (71 midwives)

Henry Luce Fellow joins PCI staff to assist in studies

HKI consultant to design Vitamin A pilot component

TBA training consultant from SE Sulawesi

HIS computer consultant to assist in design of MOH Posyandu and LAM program

Begin Posyandu Social Marketing program planning with Provincial PMT

Quarter 2:

Supervisory visits District PMTs ~ Sub-district PMTs

Posyandu Monitoring by PMTs

Train 1000 TBAs in Area I

Begin training of 1,785 Village Posyandu Working Units (PWUs) by Sub-district PMTs

Mid-term Evaluation and Report

School Posyandu program pilot

Social marketing program

Quarter 3:

Supervisory visit Provincial PMT ~ District PMTs

Supervisory visits District PMTs ~ Sub-district PMTs

Posyandu Monitoring by PMTs

Finish training of remainder 1,785 Village Posyandu Working Units (PWUs) by Sub-district PMTs

Health Center Midwife TOT Training Area II (65 midwives)

Anthropology consult for design of Drug Post program

Drug Post cadre training (Pilot project)

School Posyandu program pilot evaluation

Social Marketing program

Quarter 4:

Supervisory visit Provincial PMT ~ District PMTs

Supervisory visits District PMTs ~ Sub-district PMTs

Posyandu Monitoring by PMTs

Train 500 TBAs in Area II

Expansion of School Posyandu program

Social Marketing program

7.2. Budget

Please see attached spreadsheet

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Place dollar amounts in shaded areas only

COUNTRY: MALUKU, INDONESIA

	Quarter 1		Quarter 2		Quarter 3		Quarter 4		TOTAL 1992/93		
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
	A.I.D.	PVO	A.I.D.	PVO	A.I.D.	PVO	A.I.D.	PVO	A.I.D.	PVO	TOTAL
PROCUREMENT											
1. Office Equipment (specify)											
1. Office	0	0	0	0	0	0	0	0	0	0	0
2. EPI	0	0	0	0	0	0	0	0	0	0	0
3. ORT	0	0	0	0	0	0	0	0	0	0	0
4. Other	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0
2. Supplies											
1. Office	0	825	0	825	0	825	0	825	0	3300	3300
2. EPI	0	0	0	0	0	0	0	0	0	0	0
3. ORT	0	0	0	0	0	0	0	0	0	0	0
4. Other	0	13000	0	0	0	0	0	0	0	13000	13000
SUBTOTAL	0	13825	0	825	0	825	0	825	0	16300	16300
3. Consultants (exclude evaluation costs)											
1. Local	2170	0	0	0	0	0	0	0	2170	0	2170
2. External	0	0	3250	0	0	0	0	0	3250	0	3250
SUBTOTAL	2170	0	3250	0	0	0	0	0	5420	0	5420
4. Services (exclude evaluation costs)											
1. Manpower Services	0	150	0	150	0	150	0	150	0	600	600
2. Lectures/Talent Fees	0	0	0	0	0	0	0	0	0	0	0
3. General Contractual Services	450	0	450	0	450	0	450	0	1800	0	1800
SUBTOTAL	450	150	450	150	450	150	450	150	1800	600	2400

ANNUAL REPORT 1992-93 COUNTRY PROJECT BUDGET (disk Floppy: ANNRPT.wk1)

Place dollar amounts in shaded areas only

PVO/COUNTRY: MALUKU, INDONESIA

	Quarter 1		Quarter 2		Quarter 3		Quarter 4		TOTAL - 1992/93		
	(a) A.I.D.	(b) PVO	(c) A.I.D.	(d) PVO	(e) A.I.D.	(f) PVO	(g) A.I.D.	(h) PVO	(i) A.I.D.	(j) PVO	(k) TOTAL
II. EVALUATION (specify)											
A. Baseline Survey	0	0	0	0	0	0	0	0	0	0	0
1. Consultant/Contract	0	0	0	0	0	0	0	0	0	0	0
2. Staff Support	0	0	0	0	0	0	0	0	0	0	0
3. Other	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0
B. Mid-term	0	0	500	0	0	0	0	0	500	0	500
1. Consultant/Contract	0	0	3570	0	0	0	0	0	3570	0	3570
2. Staff Support	0	0	250	0	0	0	0	0	250	0	250
3. Other	0	0	655	0	0	0	0	0	655	0	655
SUBTOTAL	0	0	4975	0	0	0	0	0	4975	0	4975
C. Final	0	0	0	0	0	0	0	0	0	0	0
1. Consultant/Contract	0	0	0	0	0	0	0	0	0	0	0
2. Staff Support	0	0	0	0	0	0	0	0	0	0	0
3. Other	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0
III. PERSONNEL											
A. Technical	14631	8918	14631	8918	14631	8918	14631	8918	58522	35671	94193
B. Administration	2118	0	2118	0	2118	0	2118	0	8473	0	8473
C. Clerical	948	0	948	0	948	0	948	0	3790	0	3790
D. Temporary	643	0	643	0	643	0	643	0	2571	0	2571
SUBTOTAL	18339	8918	18339	8918	18339	8918	18339	8918	73356	35671	109027

Place dollar amounts in shaded areas only

PVO/COUNTRY: MALUKU, INDONESIA

	Quarter 1		Quarter 2		Quarter 3		Quarter 4		TOTAL -- 1992/93		
	(a) A.I.D.	(b) PVO	(c) A.I.D.	(d) PVO	(e) A.I.D.	(f) PVO	(g) A.I.D.	(h) PVO	(i) A.I.D.	(j) PVO	(k) TOTAL
IV. TRAVEL/PER DIEM											
A. Domestic	10820	5930	56000	18370	32300	0	13815	0	115076	23930	139006
B. International	0	0	0	0	7000	0	0	0	7000	370	7370
SUBTOTAL	10820	5930	56000	18370	32300	0	13815	0	122076	24300	146376
V. COMMUNICATIONS											
A. Printing/Reproduction	150	4113	150	1737	150	1737	150	0	600	4113	4713
B. Postage/Delivery system	0	660	0	660	0	660	0	165	0	660	660
C. Telephone	0	1000	0	4000	0	4000	0	1000	0	4000	4000
D. FAX/Telox	0	572	0	1572	0	1572	0	572	0	2288	2288
SUBTOTAL	150	5850	150	1737	150	1737	150	1737	600	11061	11061
VI. FACILITIES											
A. Equipment Rentals	400	0	400	0	400	0	400	0	1595	0	1595
B. Facilities Rentals	0	0	0	0	0	0	7500	0	7500	0	7500
C. Other	255	363	255	363	255	363	230	363	920	1452	2372
SUBTOTAL	655	363	655	363	655	363	8130	363	10015	1452	11467
VII. OTHER DIRECT COSTS											
SUBTOTAL	375	1048	375	1048	375	1048	375	1048	1500	4190	5090
TOTAL DIRECT COSTS	41029	36083	84229	31410	52324	13040	41259	13040	210742	93574	315316
VIII. INDIRECT COSTS											
A. Overhead/Administration	10970	3470	22413	8358	13924	3470	10970	3470	58473	24900	83373
B. Other	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	11157	3470	22413	8358	13924	3470	10970	3470	58473	24900	83373
T O T A L	53086	45685	106643	39769	66248	16510	52239	16510	270215	118474	396689