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１．合同評価レポート（英文）

２．評価指標一覧

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７．評価グリッドおよび質問票
（LDHMT、ヘルスセンター職員、日本人専門家対象）

８．Guidelines for Integrated Community-based Child Health Package

９．プロジェクト・ストーリー

JOINT EVALUATION REPORT ON THE JAPANESE TECHNICAL COOPERATION FOR THE LUSAKA DISTRICT PRIMARY HEALTH CARE PROJECT (PHASE II)

Japan International Cooperation Agency
And
Ministry of Health
Republic of Zambia

30 January 2007

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LIST OF ABBREVIATIONS

CHC	Community Health Coordinators
CHW	Community Health Workers
DHO	District Health Office
EC	Environmental Committee
GMP+	Growth Monitoring and Programme Plus
JICA	Japan International Cooperation Agency
JPY	Japanese Yen
K	Zambian Kwacha
LDHMT	Lusaka District Health Management Team
NHC	Neighborhood Health Committee
NP	Nutrition Promoter
PAI	Performance Assessment for Improvement
PAP	Prioritized Action Plans
PHAST	Participatory Hygiene and Sanitation Transformation

1. PURPOSE OF THE EVALUATION

1.1 Background of the Project

Zambia is a country located in the southern part of Africa with a population of 11.5 million. About 35% of its population lives in urban areas. The concentration in Lusaka City and its suburb is alarming, with 10-20% of total population residing in the area, causing rapid degradation in living environment especially in unplanned settlements. The health of the urban poor is more vulnerable to external changes such as economic recession and spread of HIV/AIDS and other epidemics compared to their rural counterparts, because of high congestion, poor sanitation, high risk behaviors, weak and unstable social supports due to lack of community values, and greater dependency on market economy.

Based on the situation, the Government of Japan through the Japanese International Cooperation Agency (hereinafter referred to as "JICA") in cooperation with the Government of the Republic of Zambia through the Ministry of Health and Lusaka District Health Management Team (hereinafter referred to as "LDHMT"), implemented the Lusaka District Primary Health Care Project from March 17, 1997 to March 16, 2002. For the implementation of the Project, JICA formed partnerships with AMDA (UN ECOSOC Status General) and several academic experts from the Japanese universities. During the five year cooperation period, a primary health care model specifically designed for the urban poor was developed anchored in community-based child growth monitoring and promotion and participatory environmental sanitation improvement in George Compound. The project resulted in increased coverage of child health services and a reduction in morbidity among children. In addition, the project identified the importance of "community value for health" for promoting community health activities.

With the success of the above mentioned project, the Government of the Republic of Zambia requested further expansion of the cooperation to the Government of Japan. After a series of discussions and preparatory studies, both parties agreed to implement Lusaka District Primary Health Care Project Phase II, (hereinafter referred to as "the Project") targeting six unplanned settlements, i.e. compounds of Chawama, Chipata, Kanyama, Mtendere, Ng'ombe and George. The Project was officially initiated on July 15, 2002 for another five years.

1.2 Objectives of the Evaluation

The purpose of the study is to evaluate the overall achievement of the Project since its commencement in 2002, using JICA's standard project evaluation criteria of relevance, effectiveness, efficiency, impact and sustainability. The results, including lessons learned and recommendations for the benefit of both Zambian and Japanese Governments, shall be presented in a final evaluation report.

1.3 Evaluators

The evaluation exercise was conducted jointly by two team of evaluators, representing both the Japanese and Zambian sides. The members of respective teams are as follows:

<The Japanese Side>

Name		Affiliation	Period of assignment
Mr. Yojiro Ishii	Leader	JICA	Jan 22 ~ Feb 1
Prof. Takusei Umenai	Primary Health Care	IUHA	Jan 22 ~ Feb 1
Dr. Shigeru Suganami	NGO collaboration	AMDA	Jan 22 ~ Feb 1

Name		Affiliation	Period of assignment
Mr. Ikuo Takizawa	Evaluation Planning	JICA	Jan 22 ~ Feb 1
Ms. Rie Komahashi	Gender Analysis	JICA	Jan 22 ~ Feb 1
Ms. Minako Nakatani	Evaluation Analysis	Consultant	Jan 13 ~ Feb 1

<The Zambian Side>

Name		Affiliation
Mr. D. M. Chimfwembe	Director Planning and Development	Ministry of Health
Mr. Nicolus Chikwenya	Donor Coordinator	Ministry of Health

1.4 Mission Schedule

The detailed schedule of the final evaluation mission is attached as **Annex 1.**

1.5 Stakeholders Consulted/Interviewed

The stakeholders who were consulted or interviewed for the evaluation consisted mainly of the following:

- Counterparts of the Project (LDHMT, Health Centre Staff)
- Community volunteers (CHWs, NPs, EHC Members, NHC members)
- Japanese experts assigned to the Project
- Ministry of Health officials
- Partner Agencies (AMDA International, Valid International, HSSP)

The detailed list of the parties consulted by the evaluation teams is included in **Annex 2**.

1.6 Methodology of the Final Evaluation

1.6.1 Methodology of Evaluation

In accordance with the JICA Project Evaluation Guideline of January 2004, the final evaluation of the Project was conducted in the following process:

Step 1: The latest Project design as summarized in the Project Design Matrix[1] (PDM) version 4, was adopted as the basis for the evaluation. PDM 4 is attached as **Annex 3**. A matrix of key evaluation questions was identified and quantitative and qualitative data were gathered for analysis. Data collection methods used for the evaluation included: literature/documentation review, questionnaire survey (Counterparts, Experts), key informant interviews, focus group discussions (CHCs, CHWs, NPs, EHC members, caretakers), outputs from evaluation workshops, and direct observations.

Step 2: Project achievements were assessed vis-à-vis the Objectively Verifiable Indicators. The level of inputs and activities were evaluated in comparison with the output levels. Analysis was conducted on the factors that promoted or inhibited the Project's achievement levels including matters relating to both the project design and project implementation process.

[1] Within the latest JICA Evaluation Guideline of 2004, the term Logical Framework, or LogFrame has been introduced in place of Project Design Matrix (PDM). However since the Project continued referring to this tool as PDM throughout the Project Period, this Report will use the term PDM. "JICA Project Evaluation Guideline (revised: January 2004)," Office for Evaluation and Post-Project Monitoring, JICA.

Step 3: An assessment of the Project results was conducted based on the five evaluation criteria: "relevance", "effectiveness", "efficiency", "impact", and, "sustainability".

Step 4: Recommendations for the Project stakeholders and lessons learned were formulated.

The definition of the five evaluation criteria[2] that were applied in the analysis for the final evaluation is given in Table 1 below.

Table 1: Definition of the Five Evaluation Criteria for the Final Evaluation

Five Evaluation Criteria		Definitions as per the JICA Evaluation Guideline
1.	**Relevance**	Relevance of the Project is reviewed by observing whether the Project Purpose and Overall Goal continues to align with Zambia's health policies, priorities, the needs of the target group, and with the Japanese development assistance strategy.
2.	**Effectiveness**	Effectiveness is assessed to what extent the Project has achieved its Project Purpose, clarifying the relationship between the Project Purpose and Outputs.
3.	**Efficiency**	Efficiency of the Project implementation is analysed with view on how much Outputs have been produced vis-à-vis the Inputs of resources.
4.	**Impact**	Impact of the Project is assessed in terms of positive/negative, and intended/unintended influence caused by the Project.
5.	**Sustainability**	Sustainability of the Project is assessed in terms of institutional, financial and technical aspects by examining the extent to which the achievements of the Project will be sustained after the Project is completed.

2. RECORD OF PROJECT IMPLEMENTATION

2.1 Inputs

2.1.1 Japanese Side

a) **Experts Dispatched:** A total of **9** Long-term Experts in five areas of expertise, with a total of **244.7** person months, were assigned. The positions for the experts are: Chief Advisor, Project Coordinator, Health Planning and Management, Environmental Health.

A total of **15** short-term experts in 19 assignments, with a total of **50.8** months, have been dispatched at the time of the Final Evaluation. The fields of expertise included the following areas: Child Health, Monitoring and Evaluation, Participatory Approach, GIS, Public Health Analysis, Environmental Health, IEC Materials, Organizational Management, Multimedia Production, CBO Management, Nutrition Promotion, IEC Material, CBO/NHC Capacity Development, Statistical Survey and Analysis. The detailed list of long term and short term experts is shown in **Annex4.**

b) **Trainees Accepted:** A total of **21** counterparts were trained under the Counterpart Training Scheme in Japan. The following are the training courses and the number of trainees accepted in the respective courses: Community Health Services (9), Health Policy for Community Activities (3), Nutrition and Diet Improvement for Women Leaders II (2), Multimedia Production for Community Health (2), Counter-measure for Improvement of MCH indices II (1), Seminar for Health Policy Development (1),

Data Analysis for Community Health (1), Health Administration (1), Community Health Administration (1). The detailed list of Counterparts trained in Japan is shown in **Annex 5**.

c) Equipment Provided: Machinery and equipment worth **K 1,016,541,700** or **JPY 26,709,522** [3] in total had been provided at the time of the Final Evaluation. Some of the major equipments procured included 2 vehicles, 12 electric hammer mills, 30 baby hanging scale and adult weighing scale, various office equipment and some consumables such as syringe, needles, ORS, etc. The detailed list of equipment is shown in **Annex 6**.

d) Operational Expenses Support: A total of **K 4,943,196,082** or **JPY 137,080,238** was disbursed as direct operational costs for project activities at the time of the Final Evaluation from the Japanese side. The details of the Operational Expenses is shown in **Annex 7**.

2.1.2 Zambian Side

a) Appointment of Counterpart Personnel: In total, **80** LDHMT officers and Health Centre staff were assigned to the Project, of which **52** are currently serving as the Counterparts. Among the 8 LDHMT Counterparts, 2 have been assigned to the Project to work full-time.

The list of counterpart personnel as of September 1, 2005 is shown in **Annex 8**.

b) Cost-sharing of Operational Expenses: As part of the cost-sharing efforts of the Project's operational expenses, the Zambian side provided office space from July to November 2002. However due to the limited space, the Project rented its own office space from December 2003.

The Zambian side also supported 1 full time driver for 2004 and 2005, and 3 full time drivers from April to December 2006.

2.2 Activities Implemented

Most of the Project's activities, as specified under the PDM and the Project's Plan of Operations, have been implemented. The achievements for each of the activities are summarized in **Annex 9**.

3. ACHIEVEMENT OF OUTPUTS

3.1 Achievement of Output 1

Output 1: Community-based child growth promotion (CBCGP) is enhanced.

Community-based child growth promotion (CBCGP) has been enhanced in all of the six Health Centre catchment areas targeted by the Project through the introduction of the Growth Monitoring Programme Plus (GMP+). GMP+ is an integrated programme to prevent diseases and promote children's growth and development. The programme includes weighing of children as an entry point to health education, nutrition counselling, soya beans promotion, community referral, immunization, family planning, micronutrients

[3] Calculation was made with the following exchange rates for each fiscal year: FY2002: USD1=JPY120=K4,600, FY2003: USD1=JPY107=K4,700, FY2004: USD1=JPY103=K4,800, FY2005=JPY106=K4,6030

supplementation and deworming.

GMP+ is now a well established mechanism to facilitate access to basic health care services for under 5 children in the Project target area. For its operation, the Project mobilized and trained a total 242 Community Health Workers (CHWs) and 252 Nutrition Promoters (NPs) to date[4]. These volunteers have become the foundation of the GMP+ activities; with the ongoing shortage of Health Centre staff, these volunteers are now able to implement these sessions with the supervision of Community Health Coordinators (CHCs). As a result, more GMP+ sessions are organized; as of 2006, there are 78 GMP+ session points in the Lusaka District with increasing attendances by the caretakers. The average frequency of weighing children for the period from 0 to 24 months has gradually increased from 14.6 times in 2002 to 15.9 times in 2006 (Indicator 3, Table 2).

The caretakers who attend the GMP+ sessions are now able to obtain advice on how to prevent their children from getting illnesses, to monitor their growth and to promote their health. Children get referred to Health Centres in case of possible illness including malnutrition. Such close monitoring on the health status of the children as well as provision of basic services at the community level have contributed to the reduction of under 5 children who are below the lower growth line from 15% in 2002 to 10% in 2006 (Indicator 1, Table 2). This positive trend is shared by all Health Centres except for Chipata, where there has been an increase in the percentage of children who are below the lower growth line compared to the baseline. In Chipata, this result may be partially attributed to the absence of a full-time nutritionist assigned at the Health Centre[5].

GMP+ includes immunization services. Compared to 2004, immunization coverage in the Project target area for 12-23 month children improved from 63.8% to 74%, and the coverage for children less than 1 year old also increased from 56% to 65.3%. Furthermore, from the samples of past surveys, the Project analyzed the immunization patterns of all children born in the year 2000 (from the baseline survey) compared with the children born in the year 2004 (from the 2006 survey). It concluded that for the Polio 3, DPT 3 and Measles vaccinations, the children born in the year 2004 are receiving immunizations in a more timely manner within the prescribed period[6]. The only Health Centre that has shown a deteriorating trend in the indicators for immunization was Kanyama. Kanyama is geographically the largest compound, with one of the highest population growth rates. The reason that Kanyama's immunization rate were pulled down may be attributed to the developments in zone 9 where there is a large immigrant population with high mobility. This has made it a challenge for that Health Centre to provide systematic provision of health services and achieve numerical targets[7].

GMP+ sessions have proven to be one of the best avenues for disseminating messages about proper child feeding practices, prevention of malnutrition and common diseases like diarrhoea. In spite of some variances recorded among the six Health Centre catchment areas, an overall improvement in the knowledge and behaviour of the caretakers for the better care of under 5 children was observed (Indicator 4, 5 and 6, Table 2).

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[4] In Phase I, 177 CHWs and 99 NPs were trained.

[5] Based on feedback from Chipata Health Centre staff during Evaluation Workshop held on 23 January 2007.

[6] The recommended immunization period for Polio 3 and DPT 3 is 14 weeks after birth. For Measles, it is recommended at 9 months.

[7] Based on feedback from Kanyama Health Centre staff during Evaluation Workshop held on 23 January 2007

Table 2: Changes in Verifiable Indicators for Output 1

Indicators for Output 1	2002	2004	2006	*Target*
1. Percent of under 5 children who are below the lower growth line improves from 15% to 9.3%.	14.8%	12.3%	10.0%	*9.3%*
2. Improvement of the full immunization: a) Coverage of fully immunized 12-23 month children becomes 71% to 79%.	71.2%	63.8%	74.4%	*79.0%*
b) Percent of children who complete full vaccination before 1 year old increases from 59% to 79%.	58.9%	56.0%	65.3%	*79.2%*
3. Frequency of weighing children aged between 0-24 months increases from 14.6 times to 19.2 times.	14.6 times	15.6 times	15.9 times	*19.2 times*
4. Percent of mothers who introduced other food except breastfeeding after 6 months becomes 50% to 67%.	49.5%	56.6%	55.9%	*67.4 %*
5. Percent of caretakers who have adequate knowledge on prevention from malnutrition increases from 32% to 54%.	32.4%	42.1%	44.0%	*53.6%*
6. Percent of caretakers who have adequate knowledge on prevention from diarrhoea increases from 46% to 52%.	46.2%	34.8%	61.1%	*51.6%*

Source: Household Survey, PHC Project 2002, 2004, 2006

In order to monitor the quality aspect of the GMP+ sessions, the Project introduced Performance Assessment for Improvement (PAI), which is recorded jointly by the LDHMT and the Health Centre staff. As observed in Table 3 below, the mean annual PAI results improved overall for all Health Centres between 2003 to 2006, implying the enhanced capacities to conduct GMP+ in all of the targeted catchment areas. Such enhanced capacities may pave the way for expanding the components of GMP+ in addressing other common illnesses such as HIV/AIDS, TB and malaria.

Table 3: Average Annual PAI Results for 2003-2006

Health Centres	2003	2004	2005	2006
Chawama	24.0	56.8	79.4	83.3
Chipata	38.0	57.5	88.8	76.3
George	70.0	84.3	85.5	91.3
Kanyama	38.5	67.7	83.8	59.0
Mtendere	41.0	42.5	56.7	72.0
Ng'ombe	31.5	58.3	76.6	68.7

3.2 Achievement of Output 2

Output 2: Community-based environmental health activities are improved.

There have been significant improvements in community-based environmental health activities in all of the six Health Centre catchment areas. The core approach introduced in this Output was the promotion of Participatory Hygiene and Sanitation Transformation (PHAST). PHAST is an approach designed to promote hygiene behavior, sanitation improvements and community management of sanitary facilities using specifically developed visual tools and other participatory techniques. Through PHAST and various community-based sensitization activities, the Project succeeded in changing the perceptions and practices among the community members and equipped them with the skills and tools to prevent diarrhoeal diseases including cholera.

At the center of all environmental health activities in each of the catchment area is the Environmental Health Committee (EHC) comprising of community volunteers trained in PHAST methodology. To date, the Project has sponsored 316 participants to attend PHAST workshops. The workshops were implemented by PHAST facilitators, or the Environmental Health Technicians, at each of the Health Centres who also received Training of Trainers by the Project.

Based on the priority activities identified during the PHAST workshops, the EHC members have implemented 1) hygiene and sanitation facilities construction such as VIP toilets and drainage, 2) provided services such as solid waste management and vector control, 3) conducted door-to-door community sensitization, and 4) carried out health inspection and other educational activities.

Cholera has become a serious public health concern in the Lusaka District within the last few years. The incidence and the case fatality rate for the last five years is summarised in Table 4 below.

Table 4: Incidence of Cholera within the Lusaka District (2002-2006)

Year	Incidence	Deaths	CFR (%)
2002	0	0	0
2003	484	11	2.2
2004	6,058	176	2.9
2005	1,225	8	0.7
2006	4,828	140	2.9

Source: PHC Office, 2006

Door-to-door sensitization together with cholera contact tracing activities where cases are identified, have proven effective in controlling the disease especially during the rainy season when risk of cholera outbreaks increases. The Project also supported the establishment of the Cholera Surveillance Centre, and developed a surveillance system based on the epidemic analysis utilizing GIS. Spatial epidemiology with application of GIS of the cholera outbreak contributed to the analysis of attributing factors; and presented demonstrative pictures of the transmission and distribution of the cholera cases. As a result, high incidence of cholera was observed in areas that lack drainage and proper sanitation facilities. These results provided evidence that the activities promoted within PHAST would be in fact effective in the prevention of cholera; nevertheless much more needs to be done to take full control of the epidemic.

The results from the focus group discussions the evaluation team held with CHCs and the EHC members highlighted that door-to-door sensitization, implemented by the community volunteers within their own communities, is a powerful medium of delivering messages for environmental health for the following reasons: 1) community members tend to accept the message easier when delivered face to face by the people that they are familiar with, and 2) within the confidentiality of their homes the community members feel free to ask advice regarding their individual habits. 2006/07 has been the third season in which door-to-door sensitization activities are being rolled out. In the past two seasons, more than 50,000 households were sensitized per year.

The impacts of the activities are seen in the achievement level of some of the indicators for Output 2. The Project achieved its predetermined targets in 5 of the 6 indicators regarding usage of safe water, appropriate disposal of garbage, hand-washing and use of latrines (Indicators 1a, 1b, 2, 3, 4 Table 5). Among these, both the survey results as well as information from the field level interviews held by the evaluation team call attention to the significant behaviour change at the household level with regards to treatment of water (through chlorination or boiling) and hand washing. This improvement was shared in all of the six Health Centre catchment areas. Moreover, it should be noted that Kanyama, Chipata, Chawama and Mtendere achieved their targets for hand washing, and Chipata and Chawama achieved their targets for safe water

treatment.

On the other hand, the percent of households which kept water in a proper way to avoid contamination has dropped from 53.8% in 2004 to 49.2% in 2006. A downward trend was observed in George, Kanyama, Mtendere and Chipata. The reasons raised for this trend were the following: 1) the community volunteers had not put so much weight on projecting the message regarding proper storing of water compared to others such as hand-washing and safe treatment of water, and 2) the size of the containers recommended for the appropriate storing of water was 20 litres which many of the households felt was too big for the children to use, therefore families continued to use open buckets.

Table 5: Changes in Verifiable Indicators for Output 2

Indicators for Output 2	2002	2004	2006	*Target*
1. Usage of safe water: a) Percent of households that access to safe water increases from 86% to 91%.	85.7%	86.2%	94.4%	*90.9%*
b) Percent of households who make drinking water safe through boiling or chlorination increases from 72% to 84%.	72.3%	83.8%	89.2%	*84.0%*
c) Percent of households which keep water in a proper way for avoiding contamination increases from 47% to 65%.	47.3%	53.8%	49.2%	*64.8%*
2. Percent of households dispose garbage properly using rubbish pit or midden box becomes 63% to 73%. .	63.1%	64.3%	73.5%	*72.8%*
3. Percent of households washing hands in a recommended hand-washing method increases from 14% to 41%.	13.6%	28.7%	46.0%	*40.8%*
4. Percent of households that use latrines becomes 87% to 92%.	86.7%	88.2%	91.7%	*91.6%*

Source: Household Survey, PHC Project 2002, 2004, 2006

3.3 Achievement of Output 3

Output 3: Capacity of case identification and community referral for under 5 children is developed.

In all the six Health Centre catchment areas, community's capacity of case identification and referral of under 5 children has been developed. Community referral systems are currently functioning, although with some degree of variance. The ratio of caretakers who take children to the health facilities immediately after detecting their danger signs increased from 35.3% in 2002 to 47% (Table 6). Although this indicator did not reach its initially set target of 64%, improvements were observed across all six catchment areas.

Table 6: Changes in Verifiable Indicators for Output 3

Indicators for Output 3	2002	2004	2006	*Target*
Percent of caretakers who take children health facilities immediately after detecting their danger signs becomes 35% to 64%.	35.3%	44.4%	47.0%	*64.0%*

Source: Household Survey, PHC Project 2002, 2004, 2006

During the focus group discussions at all six Health Centres, it was commonly expressed that case identification by the CHWs has improved significantly, and that both caretakers as well as Health Centre staff trust the CHWs in their capacities. Also it was noticed that the caretakers are: 1) now bringing the children to the Health Centres through community referrals in a more timely manner before the conditions become critical, and 2) now able to identify the danger signs themselves and take the initiative to bring their children to the Health Centres. Health education activities conducted at the GMP+ sessions with effective IEC materials also contributed to this attitude change.

From the operational point of view, several Health Centre staff commented that in order for the community referral system to be effective, cooperation among the Health Centre staff and cooperation between the Health Centre staff and the CHWs were essential. Especially for the latter component, monthly meetings held at each of the Health Centres have become vital fora where the clinical officers provide feedback to the CHWs for cases that needed to be followed up in the community, and the CHWs would alert Health Centre staff on possible cases that require medical attention.

Nutrition Clinics are now operating on a regular basis, and children with mild to severe malnutrition without complications are being referred from the communities or from other departments within the Health Centres. Malnourished children discharged from the University Teaching Hospital are also followed up at the clinics. With regards to this activity, the Project played more of a coordinating role to standardize the procedures in operating the Clinics with the support of other external partners such as Valid International and Child Advocacy International (CAI).

The Health Post in Kanyama was inaugurated in July 2005, and since then is providing the much needed health services through the function of monthly GMP+, outpatient department and nutrition clinic in an area where people have difficulties accessing the Health Centre. The Project is currently monitoring the effect of the establishment of such Health Post, but has no other plans to expand to other regions.

3.4 Achievement of Output 4

Output 4: Planning and financing capacity of LDHMT and health centres in support for community-based health activities is strengthened.

Planning capacity of the LDHMT and Health Centres in support for community-based health activities has been strengthened. Nevertheless with regards to the financing capacity, the results are yet to be seen due to the constraints in the external factors.

The Prioritized Action Plans (PAP) exercise has been well embraced by not just the Health Centers in the Project target area, but also by 19 other Health Centres under the LDHMT. The results of the focus group discussions and the questionnaire survey show that due to lack of budget in support of the PAPs, the Health Centre staff regard these exercises as valuable learning opportunities to learn and practice planning, rather than as part their regular responsibilities. .

The formulation of PAPs for 2007 is the second round in which all the Health Centres were involved (third round for the Project target area). To date, LDHMT confirmed that the submission rate has been satisfactory for both the Project (2/6) and the non-Project target Health Centres (7/19)[8]. On the other hand, proceeding with the PAP exercise has been more challenging at the District Health Office (DHO). DHO has a draft PAP for the year 2007, but have not finalized yet. Further sensitization is in order to institutionalize this exercise (Indicator 1, Table 7).

In 2004, LDHMT completed a Health Strategic Plan for 2004 to 2006 for the first time at the District level. This medium-term plan is the first of its kind at the District level, and it aims to provide a strategic framework in which all Prioritized Action Plans (PAP) could align to. The draft for Health strategic Plan 2007 to 2011 is currently being finalized at the District level.

Perhaps due to the enhanced planning capacities of the Health Centres, the number of planned GMP+ and

[8] As of 20 January, the Health Centres which LDHMT confirmed submission of 2007 PAPs are Matero Main, Airport, Makeni, Bauleni, Railway, Kabwata, Mandevu, George and Mtendere.

PHAST activities by the Health Centres increased from 143 in 2004 to 210 in 2006. Yet constrained by the limited budget allocation in 2006, only 16% of those activities actually were funded. Similarly, the amount of funds released in support of such plans in 2006 amounted to only 3% of planned budget (Indicator 2a, 2b Table 7). Nevertheless, if the funding would have been made available, the overall capacity of the Health Centres to implement the GMP+ and PHAST activities was expected to be much higher. The percentage of planned GMP+ and PHAST activities implemented by Health Centres, including the ones supported by the Project, was about 60%, although this was a decline from 74.1% of 2002 (Indicator 3, Table 7).

In order to address the widening gap between the planning and implementation, the Project established the Financial Working Group in 2005 to conduct a comprehensive analysis (Annual Financial Reports) of the resource outlay available to the LDHMT. Through the discussions, areas were highlighted where further capacity development were required especially in financial management and reporting. Several training sessions to address these areas were conducted at both the DHO and the Health Centres levels (FAMS /HMIS orientation, cashier training, etc.).

Information sharing between and among the DHO and the 25 Health Centres improved to a certain degree with the publication and circulation of the Lusaka District Health Data Book 1998-2004, Lusaka District Health Data Bulletin 2005, and the regular publication of the Monthly Information Bulletin.

5S Committees, promoting 'continuous quality improvement' were established in all six of the Project target Health Centres. Although with some exceptions, these committees appear to be active and have become the driving force in improving the working environment of the Health Centres. Innovative schemes have been initiated by these committees in some Health Centres, such as in Ng'ombe, so as to generate income for the cleaning materials which can not be bought under the current financial constraints.

Table 7: Changes in Verifiable Indicators for Output 4

Indicators for Output 4	**2002**	**2004**	**2006**	***Target***
1. Prioritized Action Plan with budget for GMP+ and PHAST is annually produced by LDHMT from 2005.	n.a.	n.a.	1	-
2. LDHMT-funded GMP+ and PHAST activities of health centers: a) Percent of LDHMT-funded GMP+ and PHAST activities against the number of planned GMP+ and PHAST activities by health centres increases from 31.0% to 38.8% at the end of 2006.	n.a.	31.0% (44/143)	16.7% (35/210)	*32.5%*
b) Percent of the fund disbursed by LDHMT against the planned budget on GMP+ and PHAST activities of health centre increases from 27.1% to 32.5% at the end of 2006.	n.a.	27.1%	3.0%	*32.5%*
3. Percent of planned GMP+ and PHAST activities implemented by health centres increases from 74.1% to 80.8% at the end of 2006.	n.a.	74.1% (106/143)	60.0% (126/210)	*80.8%*

Source: Compilation of information from the Prioritised Action Plan, Financial reports and documents, Annual Action Plans of LDHMT and Health Centres, 2006

3.5 Achievement of Output 5

Output 5: Management capacity of CBOs to ensure sustainability of community-based health activities is strengthened.

Management capacity of CBOs to ensure sustainability of community-based health activities has been strengthened to a reasonable degree. The CBOs in all of the six catchment areas have now organized among themselves a Community Basket Fund Committee, each responsible for the operational and financial

management of the income generation ventures. The committee members received management training provided by the Project, and are enhancing their capacities on-the-job through the operationalization of the schemes. These ventures are intended to generate financial resources to fund incentives for the community volunteers, so that they could sustain the community-based health activities. To date, 7 ventures have been launched and 6 are currently making profit (Indicator 2, Table 8). Hammer Mill venture in Chipata just began operations in January 2007, and another in Kanyama is scheduled to begin by the end of the Project period.

Among the 6 that are making profit, the Koshu Toilet in George and the Hammer Mill operations in Ng'ombe are the only ventures that have managed to raise enough profit to be able to distribute incentives to the community volunteers. The 2 ventures in Chipata and Mtendere are still dependent on the Project to cover for the operational costs such as the utilities (water, electricity) and staff wages[9].By May 2007, the Project expects the ventures in all areas to begin providing incentives to their community volunteers.

Percent of drop out of CHWs & NPs increased from 38% of Phase I to 42.7% as of end 2006 (Indicator 1, Table 8). According to the survey conducted by the Project, among the 42.7% or 326 volunteers that became inactive, 72 either had moved out of the area or had passed away; thus the Project estimates that real drop out rate would be somewhere between 30 to 35%[10]. In addition, it has been observed that the distribution of incentives in George and Ng'ombe brought on an increase in community volunteer participation at GMP+ sessions. Thus if the income generating ventures in other areas begin to allocate incentives, there is good prospect that the drop out rate would be reduced further.

The Neighborhood Health Committee (NHC) is a CBO which provides the linkage between community and the Health Centre. NHCs are supposed to take on the pivotal role in mobilizing the communities, and in formulating annual community-based action plans. More recently in the Lusaka District, the importance of NHC's role as the coordinator of community-based activities has emerged with increasing donor interventions targeting the grass roots level. NHCs were originally established as an institution in 1994, but in many areas they had become inactive. The Project succeeded in reviving the NHCs in the six Health Centre catchment areas, through the support to election of its members, provision of capacity development opportunities, and organization of the first Annual General Meeting for all NHCs in the Lusaka District in 2006. The NHC members are now often seen to accompany the community volunteers in implementing GMP+ or PHAST activities, and take part in the Community Basket Fund Committee. Furthermore, in George, Chipata, Chawama, and Kanyama catchment areas, CBO Joint Coordination Meetings are now being held under the leadership of NHC for enhanced coordination at the community level.

Table 8: Changes in Verifiable Indicators for Output 5

Indicators for Output 5	2002	2004	2006	*Target*
1. Percent of drop out of CHWs & NPs reduces from 38% (Phase I) to 18%.	37.7% (96/272)	24.0% (70/292)	42.7% (326/764)	*18.0%-*
2. Number of income generating activities that are supervised by the community basket fund committee and making profit increases from 0 to 12.	0	n.a	6	*12*

Source: Compiled from registration of CBOs, CHW and NP, Report of Community Basket Fund Committees, 2006.

[9] However there are cases such as in Chipata and Mtendere where the community volunteers are taking turns working for the ventures without pay, to cut down on the operational costs.

[10] Extensive analysis on the factors which increase or decrease motivation among the community volunteers has been conducted by the Project. *Study on Factors that Determine Active and Inactive Volunteers*, 2006. JICA PHC Project.

4. ISSUES CONCERNING PROJECT IMPLEMENTATION PROCESS

4.1 Seamless Expansion from Phase I

One of the fundamental advantages of the Project was its experience from Phase I, where many of the core programme components such as GMP+ and PHAST were already tested and had been proven effective. The Project took full advantage of these experiences, and started Phase II with immediate consolidation of these approaches. Some of the activities were streamlined into packages and various Guidelines and Manuals were drafted to facilitate systematic replication in the newly added catchment areas.

The Project also introduced new components, such as capacity development of the DHO and the Health Centres or introduction of the income generation ventures. These new activities were designed to complement and enhance the sustainability of its core components. The fact that the Project has persistently focused on its core components, GMP+ and PHAST, and expanded on its achievements has contributed to its effectiveness as well as its efficiency. Some factors that enabled the Project to ensure the continuity from Phase I was the strategic reassignment of experts who were either involved in Phase I or were involved in the project formulation for Phase II. Furthermore, the continued conceptual and technical backstopping provided by the Technical Advisory Committee Members, who have been involved from Phase I, further strengthened the consistency between the two Phases.

4.2 Project Management Strategies

The Project, as part of its project management strategy, adopted a medium term strategic plan in addition to the PDM, dividing the 5 year implementation into 4 phases with respective milestones. Such medium term plan facilitated monitoring of the Project at the outcome level to ensure that the Project was on track in the achievement of the Project Purpose. Furthermore, it provided the strategic perspective necessary to prepare as early as possible for the phasing out of the Project so as to guarantee the sustainability of its achievements. On a separate note, the Project has also formulated with its main stakeholders the "Time Frame and Strategy for Sustainability", which lays out step-by-step exit strategy in view of the Project completion in July 2007. These medium term planning frameworks served to enhance the effectiveness of the Project.

The Project had a rigorous monitoring regime. Starting from the baseline survey conducted in 2002, 2 more surveys were conducted in 2004 and 2006 to collect quantitative data for the indicators identified in the PDM to validate the effectiveness of its interventions. Various qualitative inquiries were also conducted to complement the results of the household surveys. The project effectively utilized GIS to develop a digitalized base map of Lusaka city that facilitated monitoring and evaluation of the qualitative data. The information derived from these studies was utilized as a basis to discuss Project activities and strategies and raise issues together with the DHO, Health Centre Staff, and CBOs in various forums.

Structurally, the Project had put in place a considerable number of Committees, Working Groups, Task Force, Meetings at the Policy level, District level, Health Centre level, and sometimes even at the community level. Although each had its own purpose and focus, it collectively acted as mechanisms for systematic monitoring of progress and for information sharing among key stakeholders. It also created opportunities in which the Zambian partners would be encouraged to take part in the decision-making process at various levels, and contributed to strengthening their ownership of the Project implementation Process. On the other hand, the organization as well as participation to these structures was perceived by

some of DHO and Health Centre Staff as an additional burden to their already overloaded list of responsibilities.

4.3 Involvement of External Partners

Another fundamental characteristic of the Project implementation has been the involvement of external partners both at the policy level and the operational level. Annual Stakeholders Meeting was held in the area of Child Health and another in Environmental Health, mobilizing potential partners and encouraging information sharing at that level. The sharing of Project achievements in such fora strengthened the impact of the Project, especially at the policy level.

At the operational level, Task Force Meetings were organized in various Project components, but from the coordination point of view, the quarterly Child Health Task Force meetings had been effective in determining the division of responsibilities among the stakeholders working in the same geographical area to avoid duplication and harmonize approaches. Another Task Force is scheduled to be launched in February 2007 to coordinate community-based activities in all sectors, and create a common understanding with regards to mobilization and support for the community volunteers.

Finally, although not included in the PDM, the Project has been planning for a Sub-Regional Conference on community-based child health interventions scheduled in May 2007, jointly organized by the Ministry of Health, LDHMT, Health Services and Systems Program (HSSP), WHO, UNICEF and JICA. This is intended to be one of the first sub-regional initiative organized in Zambia focused on sharing experiences in implementing community based child health interventions; and is expected to strengthen partnerships among stakeholders for the promotion of community-based child health interventions.

5. EVALUATION RESULTS BY THE FIVE EVALUATION CRITERIA

5.1 Relevance

The Project's relevance is very high vis-à-vis the needs of the target group, the national health policies of Zambia and Lusaka District, and the official development policies of Japan.

5.1.1 The Project's objectives are relevant to the needs of the target group (Under 5 Children in the Project Target Area)

Zambia's official statistics estimates that the country's Under 5 mortality is 168 out of 1,000 live births (2002), and according to the Human Development Report of 2006, Zambia ranks 165th out of 177 countries in the world regarding this indicator. Although it is estimated that urban areas have a lower rate of Under 5 mortality rate compared to the rural areas, the health conditions for the children in the urban areas remain precarious. As seen in Table 9, the incidence of the four major diseases continues to be much higher in the under 5 age group compared with the over 5 age group at both the national level and the Lusaka Provincial level. In addition, it can be observed that the Lusaka District has a higher incidence rate of diarrhoea (non-bloody) and respiratory infection compared to the national average.

Table 9: Incidences of Top Four Major causes of Morbidity, 2005

(Incidence=Cases per 1000 population)

Diseases	National		Lusaka Province		Lusaka District
	Under 5	*Over 5*	*Under 5*	*Over 5*	*Under 5*
Malaria	1108	197	806	190	544.7
Respiratory Infection (Non-Pneumonia)	469	87	440	87	330.1
Diarrhoea non-bloody	258	31	335	59	281.6
Respiratory Infection (Pneumonia)	132	21	185	32	166.9

Source: 2005 Annual Health Statistical Bulletin, Ministry of Health, LDHMT Action Plan 2007-2009

The living conditions in the urban areas, especially in the compounds, are conducive to health hazards, especially for the children living in these areas. As of 2005, in the Lusaka District, 65% of the households have access to piped water supply while 35% continue to use other sources including shallow wells and streams. With regards to sanitation, it is estimated that 60% are using flush toilets, but the rest are using pit latrines and other measures. However in the compounds, the use of shallow wells and pit latrines shared by several households are the more common practices observed. In addition, Lusaka City Council estimates that only 10% of the total amount of solid waste management generated by its citizens is collected[11].

To exacerbate the situation, the compounds in the Lusaka District are experiencing higher population growth compared to the national annual population growth rate which is estimated at 1.6% (2005, World Bank). The survey conducted by the Project shows that the George Compound recorded an annual population growth rate of 5.5% for the period between 2002-2006, straining the already limited social infrastructure available in these compounds including health care services. In addition, it is within these compounds, that the shallow wells used by the communities can easily be contaminated from improper sanitation facilities. There is also a higher concentration of cholera incidence during the rainy season[12].

With the above conditions still existing in the Project target area, the Project's objectives to improve the health status of the under 5 children in the urban unsettled areas sufficiently addresses the needs of the target group.

5.1.2 The Project strategies and approaches were appropriate in addressing the Child Health Issues in an Urban Setting

The Project has adopted a multi-faceted approach in improving Child Health in the Lusaka District. First, the Project adopted complementary programs of GMP+ and environmental health activities to ensure that a child has better access to health care services offered in the community, but also benefits from the safe environment essential to its daily well being. Second, the Project placed community-based activities promoted by CBOs as the cornerstone of its strategy. On the other hand, the Project equally provided opportunities for capacity development at the District Health Management Team and Health Centre staff to

[11] Description of the Lusaka Solid Waste Management Project, Lusaka City Council, 2002. On the other hand community volunteers report from the field that about 50% of the households are disposing waste properly.

[12] As of 15 January 2007, the following number of cholera patients were being admitted to the Health Centres: 8 patients to George, 17 at Mateo, 7 at Chipata and one at Kanyama. 4 deaths were recorded. Times of Zambia, 16 January 2007.

ensure such system of community based activities would be incorporated into the existing health service delivery system. By strengthening the institutional development aspects of the Project starting from Phase II, the Project has paved the way for other Health Centre Catchment areas in the Lusaka District and other parts of the country to benefit from the Project achievements.

Among the 25 Health Centres' catchment areas under the jurisdiction of the LDHMT, the Project targeted six of the most deprived areas with the highest needs for improvement[13]. Such selection of the target group and the target area was appropriate from the perspective of strengthening human security in that it directly addressed the needs of the most vulnerable population.

5.1.3 The Project is in line with Zambia's National Health Policies.

The Government of Zambia has recently approved its Fifth National Development Plan (2006-2011), in which under its chapter for Health, it is underscored that Primary Health Care (PHC) approach is the main vehicle for delivering health services, since "most of the diseases in Zambia can be prevented or managed at the primary health care level which in itself can lower the cost of referral curative care by reducing the number of people seeking services.[14]" The Project is also in line with the Partnership principle of the Health Sector Reforms stipulated in the 1992 Health Policies and Strategies.

In addition, the latest draft of the National Health Strategic Plan (2006-2011) lists the following seven areas as Zambia's Public Health Priorities: 1) Integrated Child Health and Nutrition, 2) Integrated Reproductive Health, 3) HIV/AIDS, STIs and Blood Safety, 4) Tuberculosis, 5) Malaria, 6) Epidemics Control and Public Health Surveillance and 7) Environmental Health and Food Security. The Project's objectives directly serve to enhance the area of 1) Integrated Child Health and Nutrition, but also in its approach includes interventions in the area of 6) Epidemics Control and Public Health Surveillance and 7) Environmental Health and Food Security. Thus it may be concluded that the Project is relevant to the Zambia's National Health Policy.

In addition, in 2005, the Ministry of Health drafted the National Strategic Plan on Child Health in the Community to specifically improve household and community practices (Community IMCI) to reduce the infant and child mortality in the country. This Strategic Plan identifies 16 Key Family Practices classified under the areas of 'Growth Promotion and Development', 'Disease Prevention, 'Home Management' and 'Care Seeking and Compliance to Treatment and Advice', all of which contains the various community based practices promoted by the Project. This also signifies that the Project's objectives are consistent with Zambia's child health policy.

5.1.4 The Project is relevant to the Japanese Government's priority areas for cooperation

According to the Japanese Government's Official Development Policy to Zambia, the priority areas for assistance have been identified as: 1) poverty alleviation with the main focus on rural development, 2) cost-effective public health and medical services, 3) formation of a well-balanced economic structure, and 4) human resources development and institution building aimed at self-reliant development and 5) promotion of regional cooperation. The Project's objectives are consistent with 2) cost-effective public

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[13] Due to lack of reliable socio-economic data available regarding these catchment areas, it is difficult to assess its level of poverty vis-à-vis other areas. Nevertheless, for example for 2006, these compounds coincides with the high risk areas for Cholera.

[14] *Fifth National Development Plan 2006-2010, Health.*

health and medical services. It is expected that the strengthening of community-based health services would reduce the financial burden on the health system as well as improve the access to health services for the vulnerable population. In addition, maternal and child health has been underscored as a priority area for JICA Zambia and has been included among the three main programmes in the health sector, to be part of JICA Country Assistance Strategy in Zambia currently under revision.

5.2 Effectiveness

5.2.1 Achievement of the Project Purpose

Project Purpose: Health status of under 5 children is improved through establishment of effective and sustainable community-based health activities in selected Health Centre catchments.

The effectiveness of the Project is high.

At the time of the evaluation, the level of achievement of the Project Purpose is high. In all of the four core indicators significant improvements were observed, and in two of the indicators (diarrhoea-bloody and malnutrition) the Project achieved its initially set target.

The results of the indicators for each of the six Health Centre catchment areas in general showed an improvement vis-à-vis the results of the baseline survey except for Kanyama, where there was a higher incident rate of diarrhoea (bloody) and a higher prevalence of malnutrition. The deterioration of these indicators in Kanyama may be due to the fact that many residents from areas outside of the Project coverage are accessing Kanyama Health Centre, and the inclusion of these patients in the HMIS data may have influenced the results.

Table 10: Achievement Levels of the Project Purpose Indicators

Indicators for the Project Purpose	2002	2006	% Change	*Target*
1. Incident rate of diarrhoea (non-bloody) of under 5 children becomes 682.2 to 218.2 (cases/1,000 pop.)	682.2	**267.6**	▼61%	*218.2*
2. Incident rate of diarrhoea (bloody) of under 5 children becomes 25.9 to 9.5 (cases/1,000 pop.)	25.9	**5.8**	▼78%	*9.5*
3. Incident rate of measles of under 5 children is decreased from 18.2 to 0.6 (cases/1,000 pop.)	18.2	**1.3**	▼93%	*0.6*
4. Prevalence of malnutrition of under 5 children becomes 72.4 to 24.0 (cases/1,000 pop.)	72.4	**21.6**	▼70%	*24.0*

Source: LDHMT HMIS, 2006

The core stakeholders involved in the Project share a positive perception regarding the achievement of the Project Purpose. In the questionnaire survey carried out during the evaluation, among the 34 respondents (8 LDHMT Officers, 23 Health Centre Staff, 5 Japanese Experts) 31% replied that the Project Purpose was 'very much achieved' and 53% replied that it was achieved 'to a fair extent' respectively. 17% of the respondents replied 'not so much' stated that further measures are necessary to secure financial and human resources to uphold the achievements as well as tackle other diseases such as the HIV/AIDS[15] which have a significant influence on the health status of under 5 children.

[15] GMP+ also has in its scope to expand to address other childhood illnesses such as HIV/AIDs, TB and malaria.

In order to determine the factors which contributed to the achievement of the Project Purpose, the Project carried out a Multiple Regression Analysis with the indicators of the project purpose as dependent variables and those of the outputs as independent variables[16]. A significant correlation was confirmed between 1) increase of proper hand-washing practices as well as 2) increase of access to safe water, with the reduction in the incidence of diarrhoea (both bloody and non-bloody). Similarly, the two factors also had a significant correlation with the reduction in malnutrition.

For the increase in the proper hand-washing practices, this could be attributed to the health education interventions incorporated in both GMP+ and Environmental Health activities of the Project. Many of the health centre staff confirmed in the focus group discussion held with the evaluation team that 'health talks' provided by the volunteers at the GMP+ or health centre while the patients wait in line, combined with the door to door community sensitization program, were very effective in disseminating messages to the community on good practices for water treatment or sanitation.

On the other hand, improvements in the access to safe water in the Project target area may be partially due to an external factor. In 2005, a Japanese Government grant-aid project provided water supply facilities to Ng'ombe which had the lowest access rate to safe water among all six compounds in 2002. Repeating the best practice from Phase I in George where the Project's health education programs successfully increased the utilization of the water supply facilities provided by a previous Japanese grant-aid project, the Project served to sensitize the communities in Ng'ombe to actively take advantage of the new facilities. As a result, in 2006, households in Ng'ombe who responded that they have access to safe water increased by 84.2%.

Another factor that enhanced the effectiveness of the Project is the introduction of Project Management Strategies (See section 4.1.2) which enabled careful monitoring of the achievement of the Project at the Outcome level.

Some of the External Factors which may have influenced the achievement levels of the Project Purpose were as follows:

- The incidence of measles reduced drastically after the Ministry of Health implemented a national campaign on measles in 2003. The incidence of measles has been kept low to date.
- Several other external partners are active in the Project target area promoting community based health activities. These partners are Care International, Valid International, AMDA, CIRDZ, etc. The impact of their programmes must also be taken into consideration when assessing the achievement of the Project Purpose.

5.2.2 Changes in the Important Assumptions for the Achievement of the Project Purpose

Although there is a lack of data to indicate the current economic conditions faced by the households living in the unplanned compounds within the Lusaka District, their purchasing power appears to be deteriorating, although gradually. General inflation rates have curved from 23.6% of June 2002 to 8.1% in November 2006 (CSO, 2006). Prices for food items have stabilized, and the current price of mealie (white breakfast 25 kg) is at about K36,500, which is only a slight increase from 2004 prices. On the other hand, the unemployment or underemployment is high nationally[17]. The Government has just announced an increase

[16] The results of the Multiple Regression Analysis is based on the *Statistical Evaluation Analysis Report* by Short-term Expert Mr. Naoki Take, December 2006.

[17] According to the Living Conditions Monitoring Survey (LCMS III) for 2002/2003 (CSO-LCMS III 2003), out of the estimated labour force of 4,055,169, 13.3% were unemployed, 14.7% were employed in the formal sector and the balance in the informal sector.

in fuel price[18] which may have implications on the economy. Furthermore, the water user rates at the communal tap in the compounds have recently increased to K6,600 per month from K5,300 per month. In 2002, the rate was at K3,500 per month. Such increase may have a direct ramification on the households' access water, and thus the status of their health.

Since 2002, HIV/AIDS continues to be the major cause of mortality for the general population as well as for the under 5 children in the Lusaka District. In 2005, it was the number one cause for mortality for all ages with the case fatality rate of 240 deaths per 1000 admissions. It has been estimated in the 2006 UNAIDS report[19] that the HIV infection levels in Zambia's urban areas among pregnant women aged 15-39 years was approximately 25% in 2004. In the Lusaka District, testing of antenatal care clients began in 2003 and up to 2005 the ratio of mothers testing positive has been stable at about 23%. However, it should be noted that the infection rate in the fathers, although the number who are testing are few and the sample quite small, show a steady increase from 35% in 2003, 37% in 2004, to 39% in 2005. This implies that although there may not be a drastic deterioration in the prevalence of HIV/AIDS, the epidemic may still be on the rise.

5.3 Efficiency

5.3.1 Inputs Levels and Achievement of Outputs

Overall, the level of efficiency of the Project was relatively high.

All of the inputs (experts, training, equipment and supplies, operational expenses) have been utilized to produce the Project Outputs. The quantity, quality and the timing of the inputs by the Japanese side were reported to be satisfactory by both sides. It was recognized that due to the financial and human resource constraints placed on the Zambian side, some of the cost-sharing arrangements of the Project activities did not realize as planned.

Most of the counterparts expressed a high degree of satisfaction vis-à-vis the Japanese experts who were dispatched to the Project. The fact that the Project managed to repeatedly assign some of the experts in key areas, with previous ample Project experience and knowledge, contributed to strengthening the Project's consistency as well as its efficiency.

Outputs 1, 2 and 3 have been well achieved. Under Output 4, good results were attained in some of the activities yet influences from the external factors have undermined its achievement levels. Output 5 has also been achieved to a reasonable degree, but requires some more time to fully attain its objectives.

Project's strategy to continuously build on the best practices of the Phase 1 has substantially enhanced its efficiency in the production of its Outputs (see Section 4.1.1).

Some of the inhibiting factors which undermined the achievement levels of the Outputs were as follows.

- All Outputs: Existence of other donor organizations implementing activities in the Project target areas, which offered financial incentives for the volunteers lead to the demoralization of some of the community volunteers to continue with Project activities.
- Output 1: With the ongoing shortage of staff at the Health Centres, nurses found it difficult to attend the GMP+ sessions to provide the immunization. Lack of transport and outreach allowance

[18] As of 16 January 2007, the retail price of petrol moved from K5,397 to K6,095 per liter. Diesel would now be sold at the retail from K4,965 to K5,377 per liter. *Times of Zambia*, January 16, 2007

[19] *2006 AIDS Epidemic Update*, UNAIDS, 2006.

are the other setbacks. Without the immunization services, caretakers lose the incentive to attend GMP sessions; and this in turn demotivates the volunteers. Other disincentives for the volunteers have been reported as 1) lack of financial, material incentives, 2) lack of sufficient refresher training, and 3) lack of recognition for their work.

- Output 2: The population growth in Lusaka, and especially in some of the compounds targeted by the Project, are high compared to the national rate. This has had a direct ramification especially on the door-to-door community sensitization programme and other grassroots environmental education activities. With the increasing number of new households, the impact of the programme may be diluted. Furthermore, greater population density may jeopardize the already fragile urban environment.
- Output 3: Community referral systems have suffered due to the lack of awareness and understanding by some Health Centre staff who do not accept the referrals made by the CHWs or NPs and give priority to those clients.
- Output 4: Lack of sufficient funds to implement the PAPs for the Health Centres have lead to difficulties in institutionalizing such tools into the health management system. Some of the Health Centres reported that, without knowing whether that the plans will be implemented, it is often difficult to be motivated in the planning process. Furthermore, without adequate implementation of the plan with regular allocation of funds, some of the monitoring mechanisms developed for the PAP have lost some of its purpose.
- Output 5: Some of the administrative procedures necessary to start up the income generating ventures (securing land use rights, procurement of electricity and water, etc.) were cumbersome and took more time than expected, delaying the overall schedule. Furthermore, the income generating ventures are still vulnerable to external conditions, such as existence of competitors or availability of maize in the market. Their income tends to fluctuate according to these conditions.

5.3.2 Changes in the Important Assumptions for the Achievement of Outputs

According to the LDHMT Action Plan 2007-2009, in 2005, out of the 1,590 Essential Drug Kits planned 1,442 kits were received from Essential Drugs and Medical Stores Supplies. To supplement any of the gaps, the LDHMT spent K199,054,450, or less than its ceiling of 4%, out of its own budget. For 2006, such data has not been made available to date, but from the interviews conducted at the Health Centres, it was reported regular drug and medical supplies from the District ceased after October, although the Centres have been supplemented on-demand basis. One exception was with the supply of vaccines, which all Health Centres confirmed that they had been delivered on time, and are in stock.

Basket Funding in 2006 reduced drastically mainly due to the Kwacha appreciation. The allocation from the expanded sector basket funds for the same period had reduced by 49.1%[20]. Total income of LDHMT, not including the medical fees, as of end of 3rd quarter 2006 was K 5,782,069,356, which was a 26.7% decrease from the same period in 2005. In addition, these funding disbursements were often delayed and erratic therefore the LDHMT could not make regular and sufficient allocations to the Health Centres.

Coordination with other Projects have continued with various partners such as Care International and Valid International, in order to avoid duplication in activities. Child Health Taskforce Meeting has been held regularly as an effective forum to promote interagency coordination.

[20] LDHMT Financial Data, January 2007.

5.4 Impact

5.4.1 Prospect for the Achievement of the Overall Goal

At the time of the evaluation, the objectively verifiable indicators had not been identified in the PDM. Therefore the following indicators were adopted, based on consultations among main stakeholders, to assess the prospect for the achievement of the Overall Goal.

Overall Goal:	Objectively Verifiable Indicators
Health status of under 5 children is improved through expansion of effective and sustainable community-based health activities in Lusaka District	1) Health status of under 5 children is improved in 3 other unplanned urban/peri-urban areas through the expansion of effective and sustainable community-based health activities*. 2) Health status of under 5 children is maintained in the current Project target area through the implementation of community-based health activities*.

* *'Community-based health activities' signify the various activities such as GMP+, Environmental Health activities including PHAST, promoted by the Project.*

The prospect of the achievement of the Overall Goal at the time of the evaluation is relatively high, if some of the important assumptions are met.

First, the Project has consistently produced outputs which guaranteed applicability in other non-Project target areas. From the early stages of Phase II, the Project concentrated on streamlining the interventions of Phase I, consolidated the best practices, and developed manuals and guidelines for standardization and further replication. These guidelines and manuals were then tested on the ground, and many have gone through several revisions to be implemented for expanded application.

Second, many of the activities in the Project, especially those under Output 2 (e.g. PHAST training of trainers), Output 4 (e.g. Prioritized Action Plans, Orientation for 5S, Financial and Management System /HMIS orientation, Cashiers orientation, etc.)and Output 5 (e.g. NHC Guideline formulation, Support to NHC elections and annual meeting, etc.) already involves Health Centers outside of the Project target areas, and are serving to build their capacities as well. There is recognition within the LDHMT that increasingly, Health Centres from non-Project target area are also demanding support to replicate GMP+ or PHAST activities in their catchment areas[21]. To date, among those Health Centre which submitted their 2007 PAPs to LDHMT, 5 Health Centres[22] included either GMP+ and/or PHAST activities.

Third, Project related activities are already being replicated in Health Centres outside of the Project target area under the initiative of the LDHMT. For example, nutritional promoters' training was implemented in 2003 in Makeni, Matero and Chainda Health Centres. A PHAST workshop was organized in Kamwala in 2005. More recently in January 2007, a proposal was approved by the Lusaka City Council to expand door to door health education programme on cholera prevention to 13 other compounds in Lusaka, utilizing the various tools and IEC materials developed by the Project[23].

Fourth, the LDHMT, in its Action Plan of 2007 to 2009, mainstreamed various Project related interventions as part of their fundamental strategy in addressing Child Health and Environmental Health. GMP+ sessions

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[21] Based on the interview with Dr. C. Mbwili Mureya, Manager of Planning and Development, LDHMT, 21 January 2007.

[22] The 5 Health Centres are Matero Main (PHAST), Makeni (PHAST), Bauleni(PHAST/GMP+), Railway(GMP+), Kabuwata(PHAST).

[23] Based on the interview with Ms. Mavis Kalumba, Senior Education Officer, LEHMT, 18 January 2007. The programme will target Jack, Frank, John Howard, John Laing, Chibolya, Zingalume, George Soweto, Lilanda, Chunga, Mazyopa, Mandevu, Marapodi, Kalikiliki. 18 Community volunteers per area will be trained.

and refresher training programmes for community volunteers, Child Health Task Force Coordination meetings are all incorporated as part of their core activities aimed to increase the immunization coverage and maintain the level of malnutrition among under 5 children. In the priority area of Environmental Health, the plan has adopted as it strategic objective "To implement the PHAST approach in 23 Health Centre catchment areas from current 10 by 2009."

Some of the important assumptions that need to be met are the following:

1) *Environmental health/housing conditions in the compounds in Lusaka District are not worsened*: With the current rate of population growth experienced in the compounds, and the limited social infrastructure in place, there is little guarantee that the environmental health/housing conditions will remain static, thus would require constant monitoring. In Kanyama, where the population growth rate in the catchment area is considered to be one of the highest in the Project target area, Health Centre staff highlighted the issue of unchecked housing construction with improper sanitation facilities as one of the emerging challenges to their environmental health activities. In the long run, proper city planning and infrastructure development would be indispensable in addressing these public health matters.

2) *Donors funding should be maintained at an acceptable level:* According to the 2005 LDHMT Annual Financial Report, LDHMT's annual budget is highly dependent on donor funding, with approximately 80% of its incomes for FY2004 and FY2005 funded through external resources. LDHMT's financial vulnerability came into view in FY2006, where the monthly allocation from the basket funding decreased by 39.9%[24], caused by the appreciation of the Kwacha. Furthermore, it was reported that the budget availability was also influenced by shifting of some donors from supporting the sector basket fund to general budget support[25]. For 2007, the Ministry of Health announced that it will ensure that at least 60% of health sector resources reach the District level. Similarly, the Ministry has pledged to increase the Government grants to Districts by 222%, from K18.8 billion in 2006 to K60.8 billion in 2007[26].

5.4.2 Policy Level Impacts of the Project

The following are some of the positive policy level impacts of the Project reported to the evaluation team:

- PHAST was highlighted in the latest draft of the National Health Strategic Plan 2006-2011 as the recommended community-based approach to address environmental health. The Plan stipulates that the Ministry needs to scale up and strengthen PHAST in all of the districts in country. In this regard, UNICEF has already conducted training targeting 18 Districts in 5 other provinces using the training manual produced by the Project.
- In many of the health programmes which aim to directly impact the community level, mobilization of community volunteers has become a common strategy. However, the issue of incentives to be given to these volunteers and the sustainability of such schemes are still under much debate. In midst of such policy discussions, the Project's model for income generating ventures in support of

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[24] Starting March 2006, monthly basket funding allocation to LDHMT decreased from the scheduled K798,484,087 to K479,540,255, or by 39.9% due to the appreciation of the Kwacha. Information from the PHC Project, 2007.

[25] Based on the interview with Mr. D.M. Chimfwembe, Director Planning and Development, Ministry of Health17 January 2007.

[26] Presentation by Mr. Henry Kansembe, Ministry of Health on Health Sector MTEF for 2007-2009.

the community volunteers has been highlighted and adopted in other policy documents, specifically in the latest National Plan for HIV/AIDS and Anti-retroviral Therapy Services (2006-2008).

- The Project's field practices and experiences were reported to have contributed to the drafting of the 2005 National Strategic Plan on Child Health in the Community, especially in defining specific intervention strategies under each of the key family practices.

5.4.3 Impact of the Project at the Health Centre and the Community Level

Some of the positive impacts reported at the community level are as follows:

- Some of the GMP+ attendees are now encouraging other caretakers who are not attending the sessions to participate. Also, GMP+ attendees inform the CHWs/NPs or Health Centre Staff on their neighbors who may have children with possible danger signs of malnutrition facilitating follow-up visits by the CHWs/NPs. (Kanyama/Chipata)
- Community volunteers have been empowered by participating actively in the Project. Many of the volunteers perceive their responsibilities as a "7 day a week" job due to the fact that many are often approached by community members outside the Project activities for counseling and emergency treatment. It is also considered a common practice to write community referrals to the Health Centres outside of GMP+ sessions. This information sheds light on a situation where in the communities, many of these volunteers are now being accessed by the community members as the entry point for basic health care services. (Mtendere/Chipata)
- There is a common perception shared among the community members with regards to what is "acceptable behavior" and what is not regarding environmental health (in sanitation practices, garbage disposal, etc). When a community member is seen as violating this norm and are becoming a threat to their environmental health, a fellow neighbor would point out this matter to the EC member for inspection and education. (Mtendere/Chipata)
- Through the Project activities, community members are now recognizing that without cooperation among the community, they can not collectively overcome some of the emerging environmental health issues. As a result, more and more members are identifying themselves as "one family" contributing to the strengthening of "community value for health". (George)

5.4.4 Negative Impacts of the Project

No significant negative impacts of the Project were reported. However, several of the stakeholders shared concerns that the increase in the community-based activities translated into extra workload on some of the Health Centre staff. In view of the already constrained staffing situation and limited allowances for transportation and outreach, it may be cause to de-motivate some staff from participating in the community-based activities.

No other negative impacts have been reported so far.

5.5 Sustainability

At the time of the evaluation, prospect of the sustainability of the Project effects remains uncertain. Several

external conditions, especially the adequate allocation of funding from the LDHMT to support the community-based health activities, need to be met in order to secure its sustainability.

5.5.1 Policy and Institutional Sustainability of Project Effects

From the policy and institutional point of view, the sustainability of the community-based health activities promoted by the Project appears to be high. As discussed already under section 5.4.2, there are already several policy measures in place in support of the continuation of Project activities, such as the official recognition of PHAST in the National Health Strategic Plan 2006-2011 and the mainstreaming of the GMP+ into the National Strategic Plan on Child Health in the Community (C-IMCI) 2005.

Likewise at the District level, the LDHMT has committed itself in its Action Plan of 2007 to 2009 to implement various Project related activities such as GMP+ sessions and PHAST activities.

Even at the Health Centre level, it has been reported that among the 2007 PAPs that were submitted to LDHMT, those from the Project targeted areas and non-Project target areas both have prioritized their community level activities focusing on Child Health and Environmental Health programmes.

5.5.2 Sustainability of Project Effects at the DHO and Health Centres

In contrast to the prospect of sustainability at the policy and institutional levels, the sustainability of the Project effects remains relatively low at the DHO and the Health Centres.

From the technical point of view, both the DHO officers and Health Centre staff have gained sufficient capacity and would most likely be able to continue practicing and even disseminating the skills and knowledge if given the opportunity. Key counterparts, who have been involved in the Project from the early stages, are naturally taking on a leading role in the community-based activities, and are successfully imparting the knowledge and skills to their colleagues and community members. Nevertheless, the shortage of nurses[27] and mid-wives at the Health Centres has emerged as a serious matter already affecting Project achievements. The Health Centres are currently operating with only 85%(639/744) of the number of Nurses required and 77%(415/565) of the number of Mid-wives required for the District. With increasing population in the respective catchment areas, this would put more pressure on the nurses/mid-wives to stay inside the Health Centres to treat their clients and less opportunity for them to implement community-based activities. It should be noted that attrition rates[28] for the nurses are one of the highest among all Health Centre Staff.

It has been also recognized that in the current LDHMT's organizational structure, there is no focal point responsible for promoting or coordinating community level health interventions, despite the considerable level of ongoing programmes in the Lusaka District. Concerns regarding the duplication of activities and its implication on the CBOs as well for needs for coordination at the District level were expressed from the community representatives during the Annual NHC Meeting in 2006. In order to address this issue, a Stakeholder's meeting is being organized in February 2007.

From the financial perspective, the budget situation for LDHMT in 2007 is expected to improve, with the exchange rate of Kwacha returning to the previous levels. In addition the Ministry has committed to

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[27] Includes all registered and enrolled nurses and registered and enrolled mid-wives. Information from LDHMT, 2006.

[28] According to the LDHMT Action Plan 2007-2009, the among the total number of staff who resigned between the period of January to September 2006, 64% of them were nurses (32/50).

increase disbursements at the District level (See Section 5.4.1). Finally, the expenditure on personnel emoluments that the LDHMT was burdened with in 2006, which amounted to nearly 40% of total expenditures at the Health Centre level, is expected to decrease[29]. However, many of the stakeholders are still skeptical of the financial availability for the FY 2007 and are waiting for the first disbursement in the first quarter of 2007.

5.5.3 Sustainability of Project Effects at the Community Level

The prospect of sustainability of the community-based activities is contingent on the availability of financial support as well as supervision and support on the part of DHO officers and the Health Centre staff.

In order to address community volunteers' needs for financial incentives, and thus strengthen the sustainability of their activities, the Project introduced income generation ventures in all of the catchment areas. In George and in Ng'ombe, the Community Basket Fund Committee began disbursing incentives to the community volunteers. Although the amount is considered small, a majority of the volunteers felt such financial incentives strengthened their motivation to participate in the community-based health activities. Subsequently, in both George and in Ng'ombe, the numbers of community volunteers participating in GMP+ sessions also increased. Thus strengthening the financial viability of these ventures appears to be a requisite in raising the sustainability of the community based health activities.

On the other hand, according to a Project study[30], when examining the factors which undermine the motivation on the part of active community volunteers in carrying out community-based activities, the reasons were raised in the following order 1) Not enough refresher courses (53.9%), 2) Not enough budget from LDHMT to support the activities (49.1%), and 3) Not enough financial incentives(42.5%). Therefore it should be concluded that financial incentives play an important factor in maintaining the motivation of the community volunteers, however financial support from LDHMT to support the activities themselves including refresher training programmes also are important factors for sustainability.

6. CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion of the Evaluation

The Project was designed based on the concept of PHC and adopted PHAST which was initially developed by WHO, UNDP and the World Bank as one of the main tools to facilitate community participation. Building on such foundation, however, the Project produced an original approach which aims at creating "community value for health" among the urban poor living in congested unplanned settlements, using GMP+ and modified PHAST as a twin intervention[31].

From the policy perspective, the Project was successful in presenting a model to effectively address the

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[29] Still, the 2007 plan budgeted for Personnel Emoluments for only 268 staff, more than 400 staff are expecting payment before they are able to got under the government payroll. Therefore, it can be deduced that the amount of these salaries would have significance on the availability of LDHMT budget in 2007.

[30] Study on Factors that Determine Active and Inactive Volunteers, 2006. JICA PHC Project.

[31] The components included in the approach encompass a wide range of health and development issues such as PHC, IMCI (c-IMCI), Human Security and Population and Environment. It can be an initial step leading to an effective community-level solution to comprehensively address those issues.

priority issues included in the latest draft of the National Health Strategic Plan (2006-2011) of the Zambian government, particularly (1) integrated child health and nutrition, (2) epidemics control and public health surveillance, and (3) environmental health and food security, augmenting limited human and financial resources of the LDHMT with full participation from the community. The experiences and the lessons learned from the Project are highly relevant to the other urban areas with similar conditions in Zambia and in other countries

The Project was successful in fostering a sense of ownership and confidence among the community people who participated actively in the Project activities. It was successful also in fostering partnership and collaborative relationship among them which was not seen before. Such changes can be regarded as a foundation for mutual support or "*chigwilizano*" in the future based on "community value for health" which was promoted by the Project. Furthermore, the Project strengthened vertical partnerships among various agents such as the community members, community volunteers, Health Centre staff, the DHO officers, and the Ministry of Health officials under a common purpose.

However, it must be noted at the same time that there is a limitation in what can be achieved by community alone and they need proper guidance and technical/financial support from local authorities. The leadership and guidance by the Health Centers, particularly by Community Health Coordinators, were essential in producing such positive changes in the target communities. While it is the responsibility of Health Centres and LDHMTs to provide necessary support to the community in the health sector, current health human resource crisis in Zambia is negatively affecting the achievement of the community.

6.2 Recommendations

<Recommendation to the Government of Japan>

1) Based on the observation of the significant achievements of the Project and its remarkable impact on improving the health of children, it is recommended that Japanese Government to consider supporting Zambian government in its effort to expand the lessons from the Project to other urban areas with similar conditions.

<Recommendation to the Government of Zambia>

1) Community-based health activities are increasingly being integrated into various health programs to address health needs of the population. Through the Project, it has also been proven that such approach is most effective for preventing illnesses among the most vulnerable population in the unplanned settlements in the Lusaka District. In light of this development, it is recommended that the Ministry of Health consider assigning staff with the responsibilities of supervising and coordinating all community-based health activities.

2) Constraints in the financial resource made available at the District level had strong ramifications on the level of achievements at the District, Health Centres, and the community levels. Taking into consideration the many challenges related to financing the health system in Zambia, it is recommended that Ministry of Health continue to allocate sufficient funds to community-based health activities based on the minimum package of interventions consolidated by the Project.

3) It is recommended that the Zambian Government adopt the Project's community-based approach as an operational strategy to address the child health issues, and initiate to promote and scale-up this approach to other urban unplanned settlements in Lusaka as well as in other major cities in the country.

It is also advisable that by the initiative of the Ministry of Health this approach be disseminated to the other areas that are seeking for a better approach to tackle the common issue.

<Recommendation to the Project>

1) The Project should continue to review the minimum packages of interventions and to streamline as much as possible to match the financial and implementation capacities of LDHMT and the Health Centres under their jurisdiction. This should also include a review and consolidation of various monitoring systems as well as management structures such as Committees, Task Force, Working Groups, regular meetings formed under each of the Project components.

2) In view of Recommendation 3 to the Zambian Government and Recommendation 1 to the Japanese Government, it is recommended that the Project with close coordination with the Ministry of Health should take an active role to facilitate dissemination of the approach through holding conferences, seminars or workshops or by other appropriate means.

6.3 Lessons Learned

1) Integration of the twin interventions of child health promotion and community-based environmental health activities was found to be an effective approach in unplanned settlements of urban settings. Promotion of behavioral change of a community towards hygiene and sanitation contributed to the prevention of diarrhoea and malnutrition. This approach was clearly conceptualized as Project principles and clearly stipulated and shared by stakeholders involved in the Project.

2) In consideration of the potential of communities in promoting their own health and at the same time its limitation, it is critical to have health care professionals who can provide supervision and technical support. In view of the seriousness in health human resource constraints currently experienced by Zambia and other countries, there should be a joint effort involving development partners to address the issue in the future.

3) The Project created structures such as committees, working groups and task forces in order to inform and to involve various administrative bodies in the community-based activities. Establishment of such management structure was important in ensuring results of community initiatives to be appreciated and reflected in the national and local health policies.

4) Establishment of firm human relationship among community people, frontline health workers is essential for the implementation of community-based health promotion programmes.

5) Introduction of a medium term plan, in addition to the PDM, to facilitate monitoring of the Project at the outcome level with a rigorous monitoring regime enabled the Project to keep track of its progress and contributed to the achievement of the Project Purpose. Furthermore, it provided the strategic perspective necessary to prepare as early as possible for the phasing out of the Project to strengthen its sustainability.

6) There was an appreciation from the CBO members about JICA experts since they actually went into the community and worked together with them. Such provision of technical support is effective in creating impact at the community level.